



GAIN

Gateway for Accelerated
Innovation in Nuclear

ADVANCED NUCLEAR DIRECTORY

Developers, Suppliers and National Laboratories

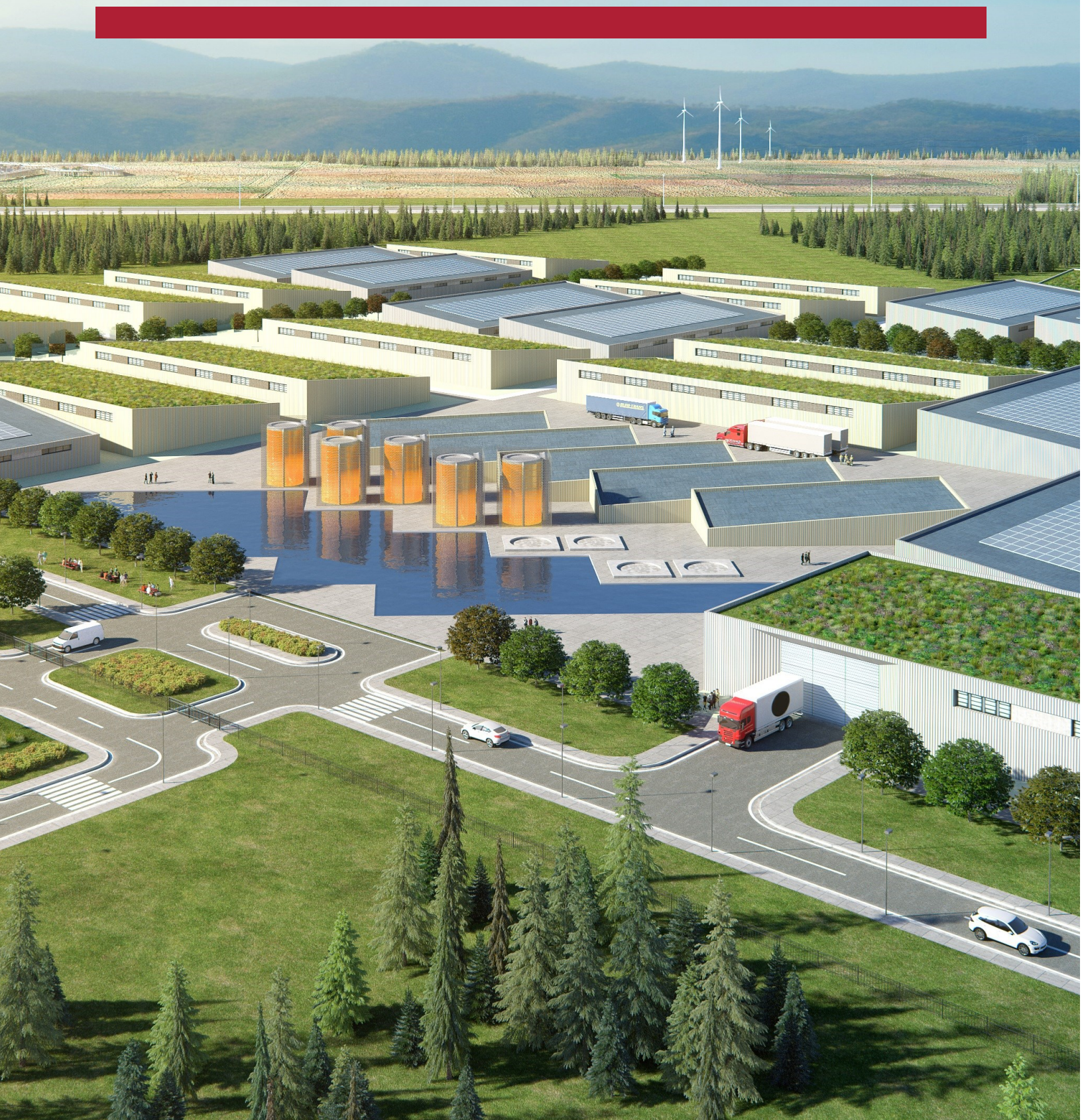


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INTRODUCTION

The Advanced Nuclear Directory offers a sample of companies engaged in the development of advanced nuclear technologies and should not be considered a comprehensive list of this industry. All companies featured have participated on a voluntary basis and are responsible for the information provided. Inclusion of a company does not indicate endorsement by any of the directory's sponsors.

ACKNOWLEDGMENT

The Advanced Nuclear Directory was created in partnership between the Gateway for Accelerated Innovation in Nuclear (GAIN) and Third Way, with the help of the United States Nuclear Infrastructure Council (USNIC).

*GAIN reserves the right to edit content for publishing purposes.

GATEWAY FOR ACCELERATED INNOVATION IN NUCLEAR



The mission of the GAIN initiative is to provide the nuclear energy industry with access to the technical, regulatory, and financial support necessary to move advanced nuclear technologies toward commercialization, while ensuring the continued reliable and economic operation of the existing nuclear reactor fleet. GAIN offers a single point of access to the broad range of capabilities across the Department of Energy (DOE) national laboratory complex. DOE has invested billions of dollars to build and maintain expertise and infrastructure within the national laboratory system. This vast capability is being leveraged via GAIN to support commercialization of new advanced nuclear technologies.



Location: Idaho Falls, ID

Founded: 2015

Director: Rita Baranwal

Federal Engagement: DOE-NE, NRC, NSUF, NEUP, LWRS, NEAMS, ART

Preferred Point of Contact: Lori Braase / lori.braase@inl.gov

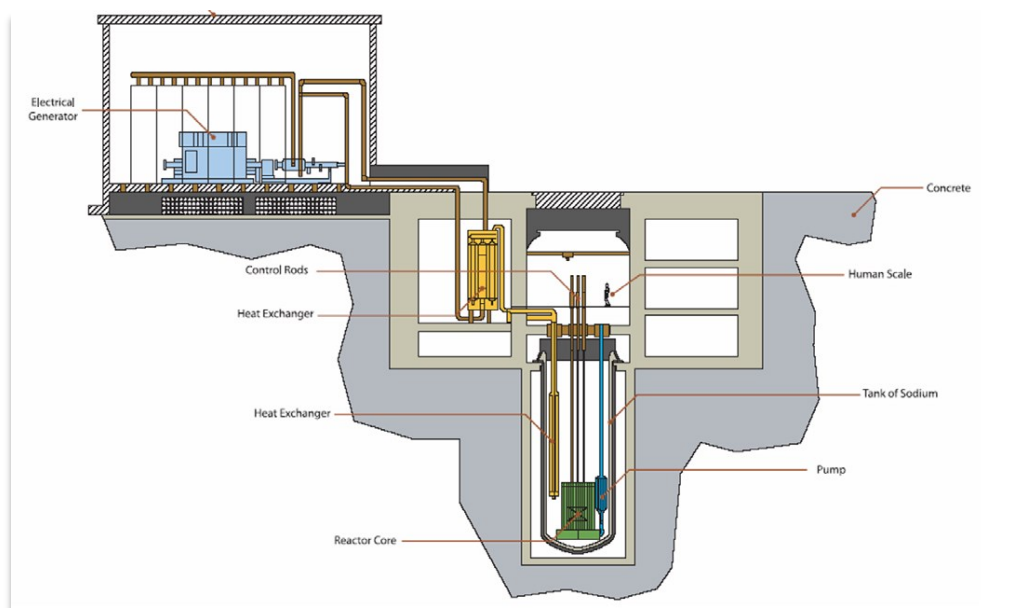
gain.inl.gov

DEVELOPERS

ADVANCED REACTOR CONCEPTS LLC



ARC is seeking to commercialize a disruptive new technology for power generation in the form of an advanced small modular reactor offering 100 MWe. The reactor will be factory-built and offer the customer a twenty-year refueling cycle that provides fixed fuel costs for 20+ years.



ADVANCED NUCLEAR | DEVELOPER

Location: Chevy Chase, MD

Founded: 2006

Principal/CEO: Donald Wolf

Major Investors: Founders and Insiders

Technology Class: Liquid metal cooled

Reactor Type: Sodium fast reactor with metal fuel

Power Output (MWe/MWt): 100 MWe / 260 MWt

Federal Engagement: N/A

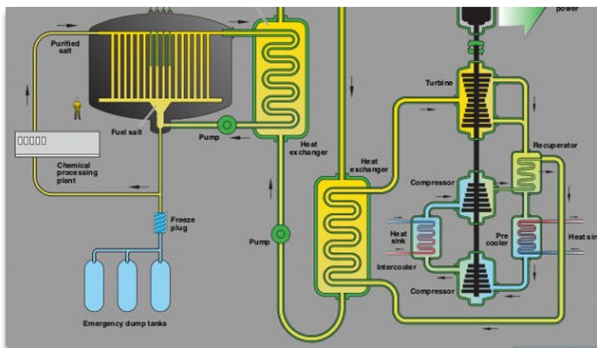
Preferred Point of Contact: Robert Braun / rbraun@ARCnuclear.com / 484-354-7840

www.arcnuclear.com

ALPHATECH RESEARCH CORP.



Alpha Tech Research Corp is developing thorium fueled Molten Salt Reactor (MSR) technology to enable a new phase in clean, safe power production.



Location: Salt Lake City, UT

Founded: June, 2016

Principal/CEO: Nick Baguley

Major Investors: N/A

Technology Class: MSR

Reactor Type: MSTIR

Power Output (MWe/MWT): 30MWt

Federal Engagement: DOE, NRC

Preferred Point of Contact: Staci Wheeler / staci@alphatechresearchcorp.com /

801-477-0715

www.alphatechresearchcorp.com

BRILLOUIN ENERGY CORP.



Brillouin Energy Corp. is a clean-technology company located in Berkeley California, which is developing ultra-clean, low-cost, energy technology capable of producing industrially useful thermal energy. Brillouin's technology is based on Low Energy Nuclear Reactions (LENR), which it generates on a controlled basis in its reactors through Controlled Electron Capture Reaction (CECR) concept. Third party verified by SRI in 2016, 2017 and 2018. Some of the basic physics of CECR, verified in a TAP with PNNL Feb-2013. Extremely scalable technology designed to drop into shell and tube heat exchangers where the tube is a new type of fire and DTC friendly. No radioactive waste, no penetrating radiation in operation. Four test systems already work with interchangeable parts.



Location: Berkeley, CA

Founded: 2009

Principal/CEO: Robert W. George

Major Investors: 46 Angel Investors

Technology Class: Adaptable gas, liquid, supercritical CO₂ Water / steam 80 -700C

Reactor Type: CECR, low energy nuclear reactions

Power Output (MWe/MWt): 10⁻⁶ - 3000+ MWe / 10⁻⁵ - 8000 MWt

Federal Engagement: NA

Preferred Point of Contact: David Firshein / dnf@brillouinenergy.com / 415-419-6429

www.brillouinenergy.com

ADVANCED NUCLEAR | DEVELOPER

COLUMBIA BASIN CONSULTING GROUP

ADVANCED NUCLEAR | DEVELOPER



CBCG is a business management and technical consulting firm which provides services relating to advanced reactor engineering and development.



CBCG PbBi Nuclear Plant Development - Power When You *Need* it to BE-THERE

Location: Kennewick, WA

Founded: 1998

Principal/CEO: William J. Stokes

Major Investors: Self-funded

Technology Class: Liquid metal cooled

Reactor Type: Lead-bismuth and sodium

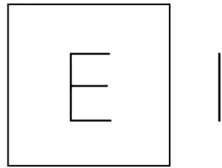
Power Output (MWe/MWt): 260 MWe / 600 MWt; 100 MWe / 250 MWt

Federal Engagement: DOE, GAIN, Other

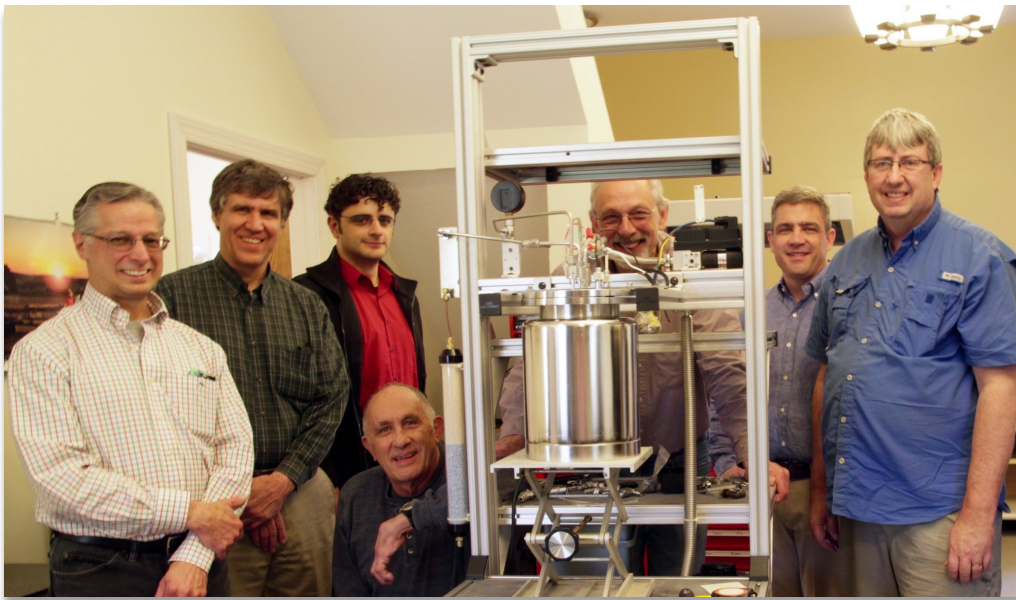
Preferred Point of Contact: William J. Stokes / info@cbcgllc.com

www.cbcgllc.com

ELYSIUM INDUSTRIES



Elysium Industries is developing molten chloride salt fast reactor technology to unlock the abundance of clean, safe, and inexpensive energy for our growing globalized and digitized world.



ADVANCED NUCLEAR | DEVELOPER

Location: Schenectady, NY

www.elysiumindustries.com

Founded: 2015

Principal/CEO: Youseff Ballout (President), Ed Pheil (CTO), Carl Perez (CEO)

Major Investors: N/A

Technology Class: Liquid salt fueled/cooled MSRs

Reactor Type: Molten chloride salt fast reactor

Power Output (MWe/MWt): 20-2000 MWe / 125-5000 MWt

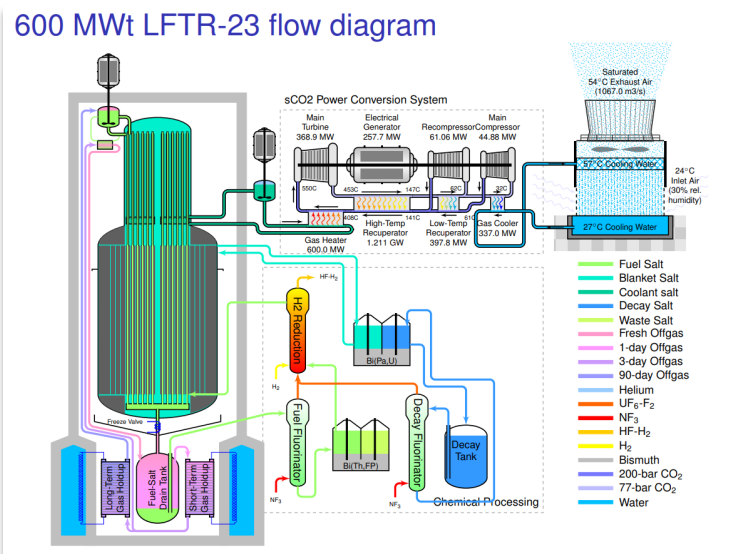
Federal Engagement: DOE, GAIN, Other

Preferred Point of Contact: Ed Pheil / e.pheil@elysium-v.com

FLIBE ENERGY, INC.



Flibe Energy was founded in 2011 to design and develop the Liquid-Fluoride Thorium Reactor (LFTR, pronounced "lifter"). LFTR is a modern incarnation of the Molten-Salt Breeder Reactor developed by Oak Ridge National Laboratory in the 1960s and 70s. The LFTR design pursues maximum fuel efficiency, minimum waste streams, gas turbine power conversion, and co-product generation. LFTR technology has steadily progressed since then and was examined in a 2015 study funded by the Electric Power Research Institute. The company also has an office in Richland, Washington.



Location: Huntsville, AL

Founded: 2011

Principal/CEO: Kirk Sorensen

Major Investors: Private

Technology Class: Molten salt reactor

Reactor Type: Liquid fuel/coolant, fluoride salts, thermal spectrum, graphite moderator, thorium/U-233 fuel cycle

Power Output (MWe/MWt): 275 MWe / 600 MWt

Federal Engagement: DOE, NRC

Preferred Point of Contact: Kurt Harris / kurt.harris@flibe-energy.com / 435-535-1414

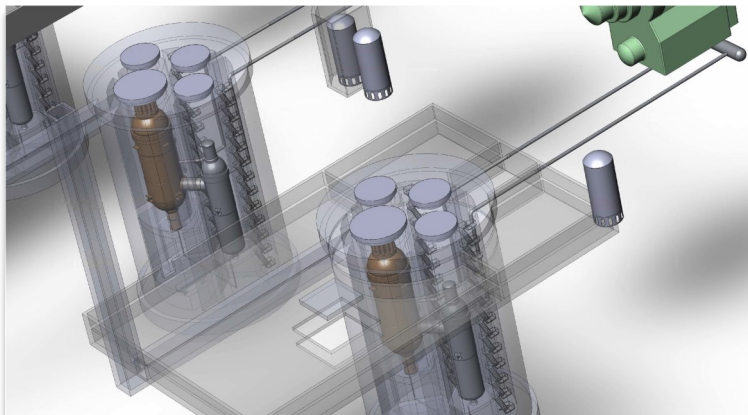
flibe-energy.com

FRAMATOME, INC.



Framatome is a major international player in the nuclear energy market recognized for its innovative solutions and value-added technologies for designing, building, maintaining, and advancing the global nuclear fleet. The company designs, manufactures, and installs components, fuel and instrumentation and control systems for nuclear power plants and offers a full range of reactor services.

Framatome is developing the Steam Cycle HTGR Generation IV advanced reactor concept. Its scalable design provides options for a variety of customer needs for high-temperature steam and electricity. Its unparalleled safety profile allows co-location with customer facilities. True walk-away safety and restart capability following a design-basis accident make the SC-HTGR a low investment risk for plant owners and operators.



Location: Lynchburg, VA

Founded: 1989

Principal/CEO: Gary Mignogna

Major Investors: N/A

Technology Class: High temperature gas cooled

Reactor Type: Steam cycle high temperature gas cooled reactor

Power Output (MWe/MWt): 22-272 MWe / 50-625 MWt

Federal Engagement: DOE, GAIN, ARPA-E, NRC

Preferred Point of Contact: Darryl Gordon / Darryl.gordon@framatome.com / 434-832-5199

www.framatome.com

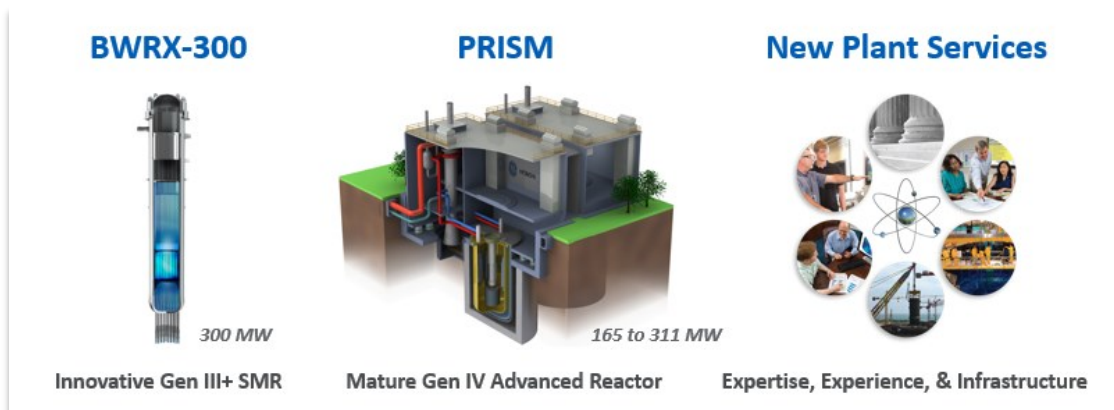
ADVANCED NUCLEAR | DEVELOPER

GE HITACHI NUCLEAR ENERGY



HITACHI

GE Hitachi Nuclear Energy (GEH) is a global nuclear alliance and world-leading provider of advanced reactor technology, nuclear fuel and services, with more than 60 years of experience developing water and sodium-cooled reactor technology. PRISM is a sodium-cooled, advanced fast reactor that employs inherently-safe metal fuel and air-cooled passive safety, and can be utilized for power generation, process heat, and closing the fuel cycle. PRISM has significant licensing, testing, design, and operation basis (e.g. EBR-II) and provides the highest potential for a successful Generation IV project. BWRX-300 is an innovative water-cooled SMR based on, but simplifying, the NRC-licensed ESBWR. BWRX-300 is projected to cost significantly less per kW than current large and SMR nuclear designs, has competitive lifecycle costs with natural gas combined cycle plants, and is ready for near term deployment. In addition to providing advanced reactors, GEH also offers New Plant Services to support the various new reactor designers by sharing its expertise, experience, and infrastructure.



Location: Wilmington, NC

Founded: 1955

Principal/CEO: Jay Wileman

Major Investors: N/A

Technology Class: PRISM: GEN IV Advanced Reactor; BWRX-300: GEN III+ SMR

Reactor Type: PRISM: Sodium fast reactor; BWRX-300: Boiling water reactor

Power Output (MWe/MWt): PRISM: 165 & 311 MWe / 471 & 840 MWt; BWRX-300: 300 MWe / 910 MWt

Federal Engagement: DOE, NRC, GNEP, ALMR

Preferred Point of Contact: Patrick Looney / Patrick.Looney@ge.com; Eric Loewen / Eric.Loewen@ge.com; GEH.NPP@ge.com

www.nuclear.gepower.com

GENERAL ATOMICS



General Atomics has been at the forefront of innovation in nuclear energy since the 1950s. We continue to push the boundaries of what is possible in advanced nuclear reactors while helping to sustain our current reactor fleet and spinning off advanced material technologies that have the potential to enhance public safety and well-being. GA's TRIGA® research reactors are some of the most successful reactor designs in history.

GA is building on its experience with TRIGA® in developing the next generation of advanced fission reactors, such as the innovative Energy Multiplier Module (EM2), an advanced high temperature helium-cooled fast reactor, producing 265 MWe of power per module at a net efficiency of 53%. EM2 employs cutting-edge advances in materials science to address the four core challenges facing nuclear energy – safety, waste, cost, and non-proliferation. It can be powered by spent nuclear fuel, operated up to 30 years without refueling, and first demonstrated at small scale (50MWe).

GA is developing silicon carbide (SiC) composites for Accident Tolerant Fuel cladding and EM2 reactor components. Innovation technology solutions are underway for specialty nuclear fuels, radioactive waste remediation, production of medical isotopes, and advanced materials for extreme environment applications.



Location: San Diego, CA

Founded: 1955

Principal/CEO: Neal Blue

Major Investors: N/A

Technology Class: Advanced nuclear technologies and materials

Reactor Type: High temperature gas cooled fast reactor

Power Output (MWe/MWt): 265 MWe / 500 MWt

Federal Engagement: DOE, GAIN, ARPA-E, NRC

Preferred Point of Contact: Ron Faibish / ron.faibish@ga.com / 202-713-8333

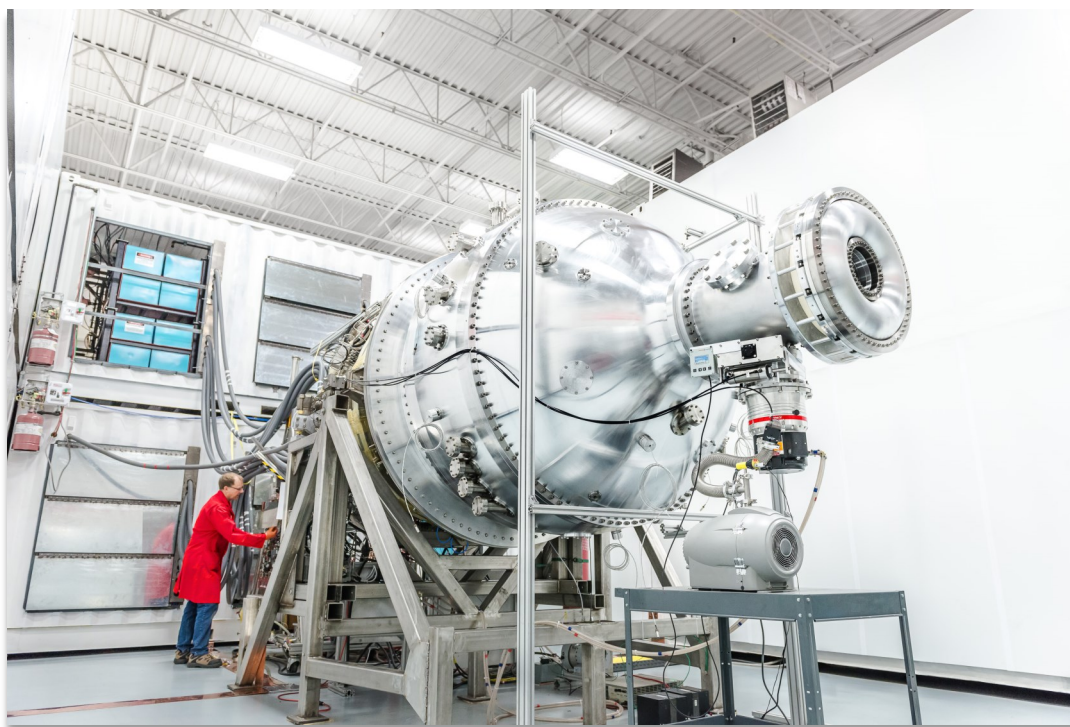
www.ga.com

ADVANCED NUCLEAR | DEVELOPER

GENERAL FUSION

The logo for General Fusion, featuring the word "generalfusion" in a white, lowercase, sans-serif font, with a registered trademark symbol (®) to the upper right of the word. The text is set against a solid red rectangular background.

General Fusion is the world's most advanced private fusion technology venture, pursuing a faster and more practical path to commercially viable fusion energy.



Location: Burnaby, Canada

Founded: 2002

Principal/CEO: Christofer Mowry

Major Investors: Government of Canada Strategic Innovation Fund, Bezos Expeditions, Khazanah Nasional, Chrysalix Energy VC, Braemar Energy Ventures, SET Ventures, Cenovus Energy, BDC Canada, GrowthWorks, Entrepreneurs Fund, Sustainable Development Technology Canada

Technology Class: Fusion

Reactor Type: Magnetized target fusion

Power Output (MWe/MWT): 200 MWe

Federal Engagement: Other

Preferred Point of Contact: Grace Sullivan / grace.sullivan@generalfusion.com

generalfusion.com

HOLOGEN LLC

HolosGen™

HolosGen develops mobile scalable integral nuclear generators with simplified and innovative designs that are optimized to produce economical, distributable, pollutant-free and, most importantly, safe electricity.



ADVANCED NUCLEAR | DEVELOPER

Location: Manassas Park, VA

Founded: 2017

Principal/CEO: Claudio Filippone

Major Investors: N/A

Technology Class: Gas cooled

Reactor Type: High temperature gas reactor

Power Output (MWe/MWt): 3-81 MWe / 5-135 MWt

Federal Engagement: N/A

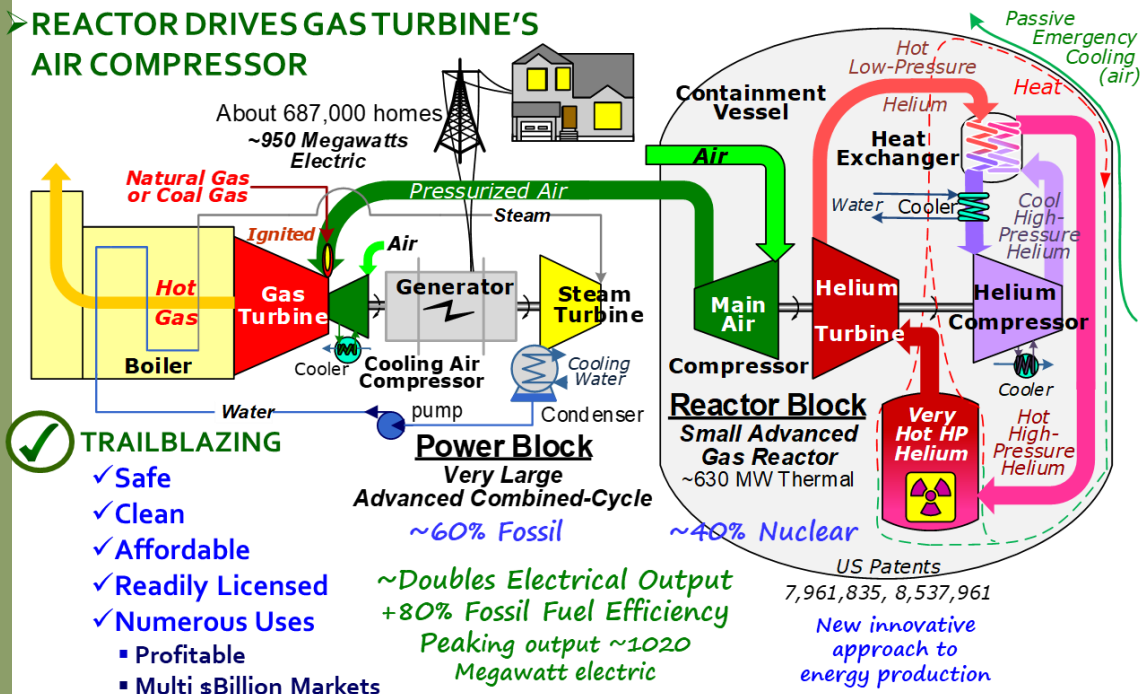
Preferred Point of Contact: Claudio Filippone

www.holosgen.com

HYBRID POWER TECHNOLOGIES LLC



REACTOR DRIVES GAS TURBINE'S AIR COMPRESSOR



US SMALL BUSINESS INNOVATION



Location: Overland Park, KS

Founded: 2011

Principal/CEO: Michael F. Keller

Major Investors: Privately funded

Technology Class: Gas cooled

Reactor Type: Graphite moderated, helium cooled

Power Output (MWe/MWt): 950 MWe / 630 MWt

Federal Engagement: N/A

Preferred Point of Contact: Michael F. Keller / m.keller@hybridpwr.com / 913-681-7687

www.hybridpwr.com

KAIROS POWER LLC



Kairos Power

Our mission: enable the world's transition to clean energy, with the ultimate goal of dramatically improving people's quality of life while protecting the environment. Kairos Power will commercialize the fluoride salt-cooled high-temperature reactor (FHR), which can be deployed with robust safety, cost competitiveness through high efficiency and low-pressure small modular design, and flexible operation to accommodate the expansion of variable renewables.



ADVANCED NUCLEAR | DEVELOPER

Location: San Francisco, CA

Founded: 2016

Principal/CEO: Michael Laufer

Major Investors: N/A

Technology Class: Solid-fueled/Molten salt cooled

Reactor Type: Graphite-moderated, fluoride salt-cooled, high temperature reactor

Power Output (MWe/MWT): N/A

Federal Engagement: GAIN

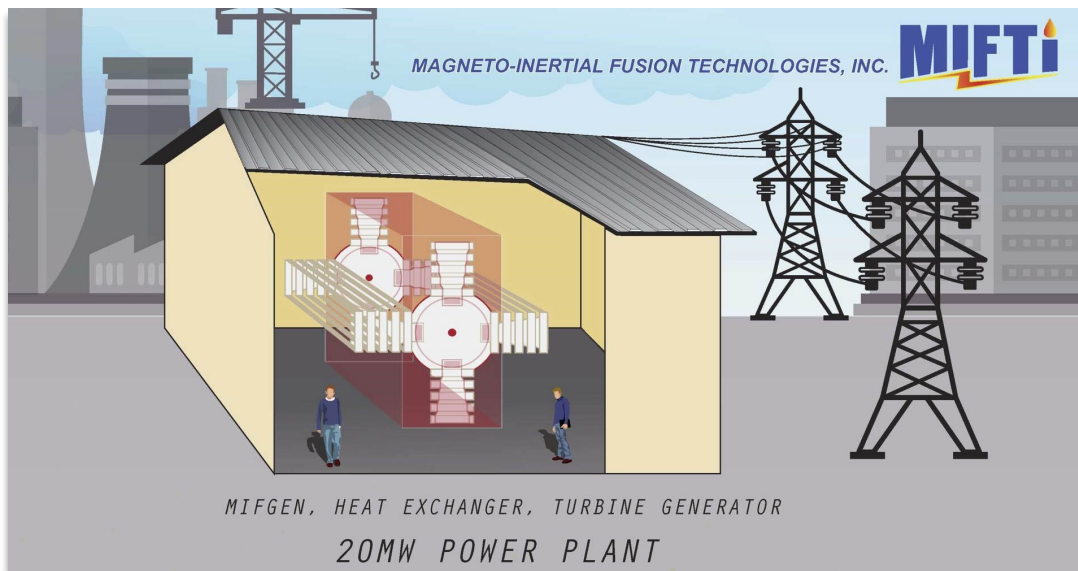
Preferred Point of Contact: Jaclyn Rodriguez / rodriguez@kairospower.com

www.kairospower.com

MAGNETO-INERTIAL FUSION TECHNOLOGIES, INC



MIFTI specializes in fusion energy and medical isotope technology.



Location: Tustin, CA

Founded: 2009

Principal/CEO: Gerald Simmons (CEO)

Major Investors: DOE, ARPA-E, Strong Atomics Fund 1

Technology Class: Thermonuclear fusion

Reactor Type: Nuclear fusion reactor

Power Output (MWe/MWT): 20 MWe

Federal Engagement: DOE, ARPA-E

Preferred Point of Contact: Jerry Simmons

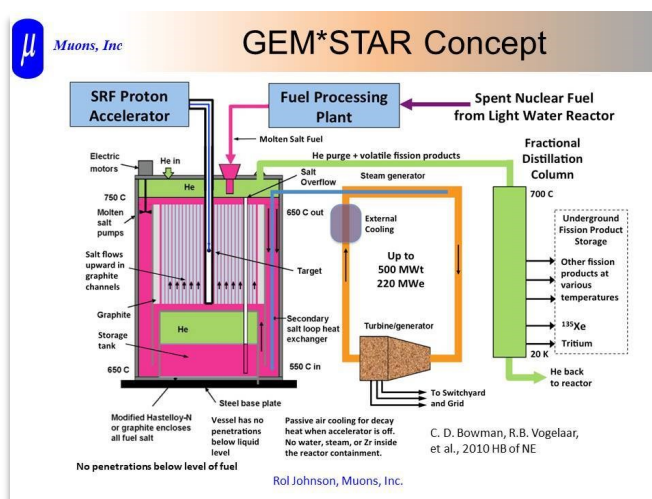
www.mifti.com

MUONS, INC.



Muons, Inc.
Innovation in Research

Partnering with national labs and universities with their extraordinary people and facilities, Muons has leveraged its creative talents to provide solutions to many problems of global and national interest. Muons has received over \$30M in competitive DOE contracts and Small Business Innovation and Technology Transfer Research grants, which have generated intellectual property as well as appreciation for our work in the accelerator and reactor communities. Examples of our inventions are included in discovery science (Muon Collider, the next atom smasher); medicine (Energy-Recovery Linacs for commercial production of new radioisotopes for therapy and diagnostics); national security (photon and neutron sources for cargo scanning); energy and environment (Mu*STAR subcritical system for carbon-free energy production); and industry (magnetron power sources for RF cavities). As a supporter of science and technology, Muons supports students and post-docs and provides computer programs for accelerator and reactor communities.



ADVANCED NUCLEAR | DEVELOPER

Location: Batavia, IL

Founded: 2002

Principal/CEO: Rolland Johnson (President)

Major Investors: Rolland Johnson

Technology Class: Advanced reactor developer

Reactor Type: SRF linac driven subcritical molten salt thermal spectrum SMR

Power Output (MWe/MWt): 220 MWe/500 MWt

Federal Engagement: DOE, ARPA-E, GAIN, DOE SBIR-STTR Programs

Preferred Point of Contact: Rolland Johnson / rol@muonsinc.com / 757-870-6943

www.muonsinc.com

NIOWAVE, INC.



Niowave is utilizing transformative science and technology for advancing nuclear power to meet the nation's energy and security needs. Niowave's Radioisotope Program established both the facilities and the NRC license to operate a subcritical assembly and perform nuclear fuel reprocessing. The team is developing a hybrid fast/thermal spectrum subcritical testbed, coupled to a superconducting electron linac, to provide peak fast-spectrum neutron fluxes greater than $1E15$ n/cm²s in heavy liquid-metal environment. The facility will be used to test novel fuels, materials, instruments and components, reactor safety designs, provide data for reactor code development, and support the regulatory process for licensing novel technology.



Location: Lansing, MI

Founded: 2005

Principal/CEO: Terry L. Grimm (President)

Major Investors: Privately funded

Technology Class: Liquid metal cooled (lead-bismuth eutectic)

Reactor Type: Hybrid fast/thermal spectrum subcritical testbed

Power Output (MWe/MWT): 0.1-10 MWt

Federal Engagement: DOE, NRC, DOD, NIH

Preferred Point of Contact: Faisal Y. Odeh / odeh@niowaveinc.com

www.niowaveinc.com

NUGEN, LLC



NuGen is developing a compact, fully integrated gas-cooled high-temperature nuclear-fueled engine on which a patent is pending. Its hallmarks would be simplicity and versatility. The engine could be deployed for a number of terrestrial and extraterrestrial uses, including remote locations, other off-grid uses and cogeneration.



Location: Charlotte, NC

Founded: 2006

Principal/CEO: Steve Rhyne

Major Investors: Founder

Technology Class: Advanced HTGR

Reactor Type: Fast spectrum

Power Output (MWe/MWT): 3-50 MWe

Federal Engagement: FOA application to DOE submitted 10/31/2018

Preferred Point of Contact: Steve Rhyne / steve@nucdev.com / 704-307-7280

www.nucdev.com

ADVANCED NUCLEAR | DEVELOPER

NUSCALE POWER



NuScale is developing SMR that integrate the reactor, steam generator, pressurizer, and containment into a single module. Nuclear power plants using NuScale technology can be designed to accommodate growing electrical demand by simply adding additional modules as the need arises.



Location: Tigard, OR

Founded: 2007

Principal/CEO: John Hopkins

Major Investors: Fluor Corporation

Technology Class: Water cooled

Reactor Type: Integral pressurized water reactor

Power Output (MWe/MWT): 50 MWe

Federal Engagement: DOE, NRC

Preferred Point of Contact: Lenka Kollar / lkollar@nuscalepower.com

www.nuscalepower.com

TERRAPOWER, LLC



TerraPower is a nuclear innovation company that originated with Bill Gates and a group of like-minded visionaries who evaluated the fundamental challenges to raising living standards around the world. TerraPower's mission is to be a world leader in new nuclear technologies, while developing innovators and future leaders in the nuclear field.



ADVANCED NUCLEAR | DEVELOPER

Location: Bellevue, WA

terrapower.com

Founded: 2008

Principal/CEO: Bill Gates (Chairman), Lee McIntire (CEO), Chris Levesque (President)

Major Investors: N/A

Technology Class: Liquid metal and salt cooled

Reactor Type: Traveling wave reactor—sodium cooled fast reactor; Molten chloride fast reactor—molten salt/liquid fuel fast reactor

Power Output (MWe/MWT): Various (up to 1200 MWe) for both concepts

Federal Engagement: DOE, NRC

Preferred Point of Contact: inquiries@terrapower.com

TERRESTRIAL ENERGY USA, INC.



Terrestrial Energy USA (TEUSA) is developing an advanced Small Modular Reactor (aSMR) using Integral Molten Salt Reactor (IMSR®) technology, for first commercial deployment in the 2020's, and to provide cost-competitive electricity and process heat to industry. The IMSR® design is a graphite moderated, LEU once-through fueled, fluoride molten salt reactor (MSR) that uses a replaceable reactor core architecture.



Location: New York, NY

Founded: 2014

Principal/CEO: Simon Irish

Major Investors: Private investors

Technology Class: Advanced small modular reactor

Reactor Type: Molten salt reactor

Power Output (MWe/MWt): 192 MWe / 400 MWt

Federal Engagement: DOE, GAIN, ARPA-E, NRC

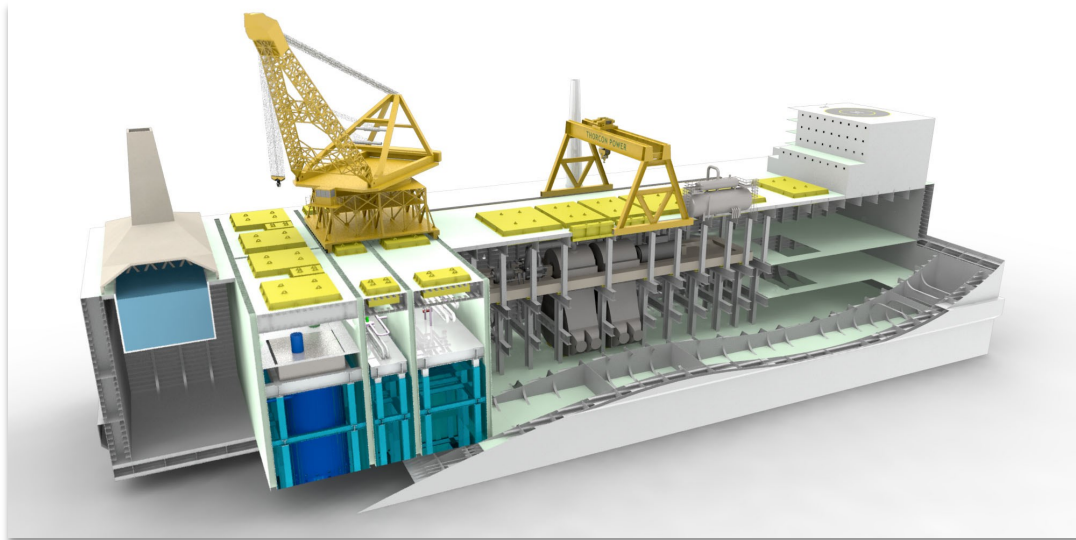
Preferred Point of Contact: Robin Rickman / rickman@terrestrialusa.com / 724-421-6434

www.terrestrialusa.com

THORCON INTERNATIONAL



ThorCon is developing a hybrid thorium/uranium liquid fission power plant that generates clean, full-time electric power at a cost cheaper than coal.



ADVANCED NUCLEAR | DEVELOPER

Location: Stevenson, WA; Singapore

Founded: 2016

Principal/CEO: Lars Jorgensen (CEO)

Major Investors: N/A

Technology Class: Salt cooled

Reactor Type: Thermal molten salt reactor

Power Output (MWe/MWT): 250 MWe / 557 MWt

Federal Engagement: N/A

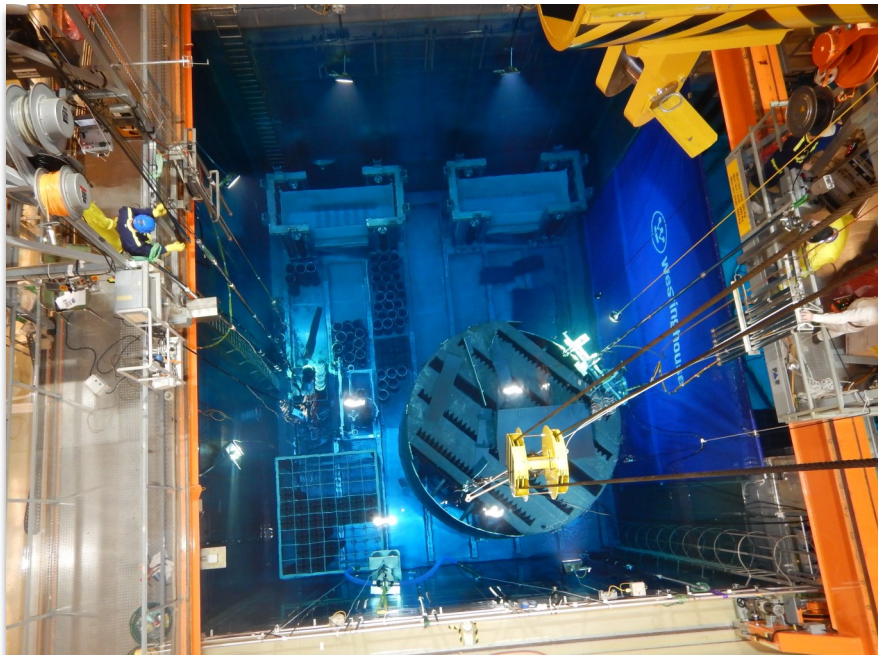
Preferred Point of Contact: info@thorconpower.com

thorconpower.com

WESTINGHOUSE ELECTRIC COMPANY LLC



Westinghouse Electric Company is the world's pioneering nuclear energy company and is a leading supplier of nuclear plant products and technologies to utilities throughout the world. Westinghouse supplied the world's first commercial pressurized water reactor in 1957 in Shippingport, PA, United States. Today, Westinghouse technology is the basis for approximately one-half of the world's operating nuclear plants. For more information, please visit www.westinghousenuclear.com.



Location: Cranberry Township, PA

www.westinghousenuclear.com

Founded: 1886

Principal/CEO: Jose Emeterio Gutierrez (President and CEO)

Major Investors: Brookfield Business Partners L.P

Technology Class: Advanced modular reactor

Reactor Type: Lead cooled fast reactor; heat pipe cooled reactor

Power Output (MWe/MWt): Lead cooled fast reactor- 400-500 MWe / 950 MWt; Heat pipe cooled reactor- 0.5-50 MWe / 2-100 MWt

Federal Engagement: DOE, ARPA-E, GAIN, NRC

Preferred Point of Contact: Layla Sandell / sandell@westinghouse.com

X-ENERGY, LLC



X-energy is a nuclear reactor and fuel design engineering services company developing Generation IV, high-temperature gas-cooled nuclear reactor designs that are smaller, simpler and meltdown-proof when compared to conventional nuclear designs.



ADVANCED NUCLEAR | DEVELOPER

Location: Greenbelt, MD

Founded: 2009

Principal/CEO: Sam Ghaffarian

Major Investors: N/A

Technology Class: Gas cooled

Reactor Type: High temperature gas cooled pebble bed reactor

Power Output (MWe/MWt): 76 MWe / 200 MWt

Federal Engagement: DOE, GAIN, ARPA-E, NRC

Preferred Point of Contact: Jeff Harper / jharper@x-energy.com

www.x-energy.com

YELLOWSTONE ENERGY



Yellowstone Energy focuses on advanced nuclear reactor design.



Location: Knoxville, TN

Founded: 2016

Principal/CEO: Matt Ellis

Major Investors: N/A

Technology Class: Salt cooled

Reactor Type: Molten salt reactor

Power Output (MWe/MWT): 200 MWe / 500 MWt

Federal Engagement: DOE

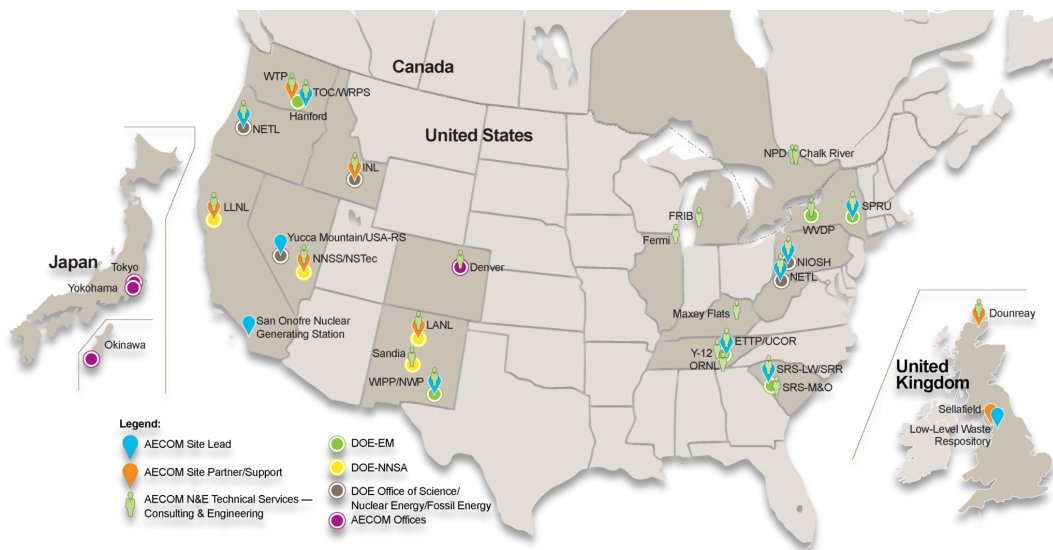
Preferred Point of Contact: Matt Ellis / matt@yellowstone.energy / 208-344-3570

www.yellowstone.energy

SUPPLIERS

AECOM

AECOM is a global network of experts working with clients, communities and colleagues to develop and implement innovative solutions to the world's most complex challenges, from delivering clean water and energy to helping governments maintain stability and security. AECOM connects expertise across services, markets, and geographies to deliver transformative outcomes.



Location: Aiken, SC

Founded: 1990

Principal/CEO: Mike Burke

Major Customers: N/A

Federal Engagement: DOE, Other

Preferred Point of Contact: Eric Knox / eric.knox@aecom.com

www.aecom.com

ADVANCED NUCLEAR | SUPPLIER

ANALYSIS AND MEASUREMENT SERVICES CORPORATION



INNOVATING **NUCLEAR** TECHNOLOGY
ANALYSIS AND MEASUREMENT SERVICES CORPORATION

AMS provides the worldwide nuclear industry with products and services to measure I&C performance and verify compliance with technical specifications and regulatory requirements.



Location: Knoxville, TN

Founded: 1977

Principal/CEO: H.M. Hashemian

Major Customers: N/A

Federal Engagement: DOE, GAIN, Other

Preferred Point of Contact: H.M. Hashemian / info@ams-corp.com

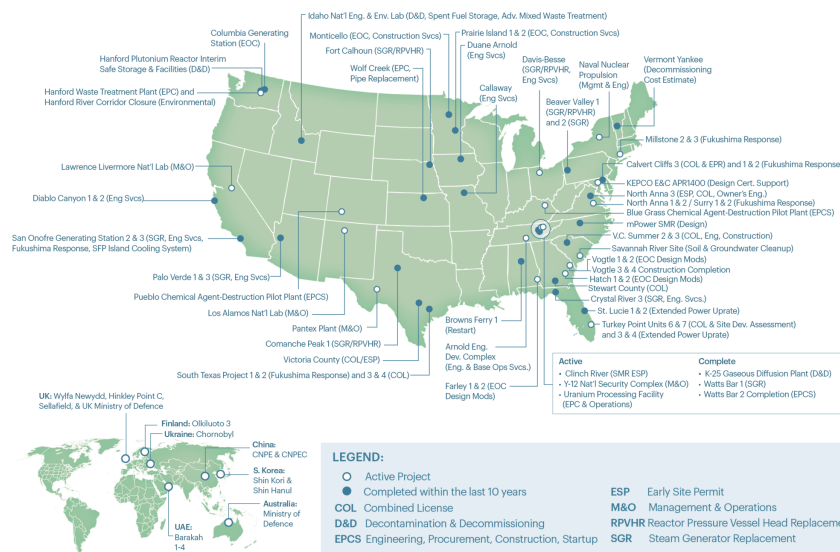
www.ams-corp.com

BECHTEL NUCLEAR, SECURITY & ENVIRONMENTAL



Bechtel's Nuclear, Security & Environmental global business unit leverages Bechtel's six decades in the nuclear industry to execute both commercial and government projects across the nuclear lifecycle. Bechtel's commercial nuclear power division is a global leader in the licensing, design, procurement, and construction of nuclear power plants, whether it is new build, plant completion or recovery, modifications to existing facilities, or advanced reactor technology development.

Bechtel Nuclear, Security & Environmental has more than 50 active and recently completed projects since 2007



Location: Reston, VA

Founded: 1898

Principal/CEO: Barbara Rusinko

Major Customers: N/A

Federal Engagement: DOE, NRC, ARPA-E, DOD

Preferred Point of Contact: Muhammad Fahmy / mgfahmy@bechtel.com / 703-429-6859

www.bechtel.com

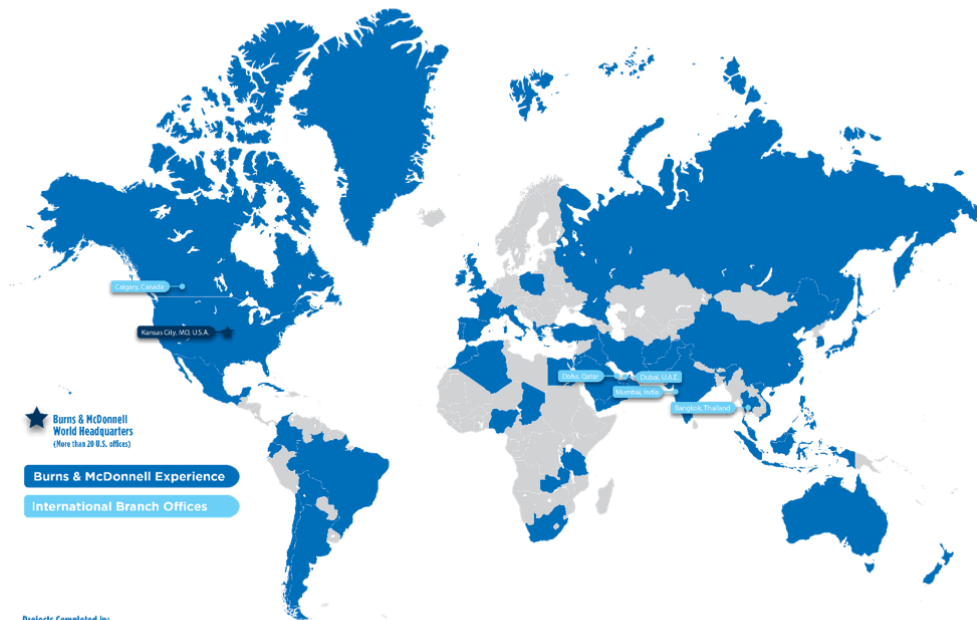
ADVANCED NUCLEAR | SUPPLIER

BURNS & MCDONNELL



Burns & McDonnell is a worldwide leader in engineering and construction with over 7,000 employee-owners in over 40 offices across the U.S. and throughout the world. At Burns & McDonnell, our engineers, architects, scientists and construction professionals do more than plan, design and implement. With a mission that remains unchanged since our founding in 1898 - Make Our Clients Successful - our team partners with you on the toughest challenges, constantly working to make the world an amazing place.

World Energy Experience



Projects Completed in:

Location: Kansas City, MO; Other worldwide offices

Founded: 1898

Principal/CEO: Ray Kowalik

Major Customers: X-energy, Bruce Power, Ameren-Callaway, Evergy-Wolf Creek, APS-Palo Verde, Ontario Power Generation

Federal Engagement: DOD, NRC, Other

Preferred Point of Contact: Glenn Neises / gneises@burnsmcd.com

www.burnsmcd.com

BWX TECHNOLOGIES, INC.



BWXT has been involved in the nuclear industry since its beginning. As a federal contractor, BWXT provides nuclear components and fuel for the U.S. Navy's submarine and aircraft carrier fleet. Commercially, BWXT manufactures heavy components for CANDU reactors, provides services for the U.S. and Canadian nuclear markets, and provides engineering and design capabilities for advanced reactor technologies and fuel.



ADVANCED NUCLEAR | SUPPLIER

Location: Lynchburg, VA

Founded: 1857

Principal/CEO: Rex Geveden

Major Customers: N/A

Federal Engagement: DOE, NRC, Other

Preferred Point of Contact: Joe Miller / jkmiller@bwxt.com

www.bwxt.com

CENTRUS TECHNICAL SOLUTIONS



Centrus Technical Solutions provides a one-stop shop for meeting the advanced nuclear industry's manufacturing and fuel design needs. Based on our experience with nuclear fuel, multi-physics modeling, engineering, design, advanced manufacturing, and project management, we can assist with the design and manufacture of critical components as well as the business planning, design, and licensing of facilities to produce new fuels. From design and engineering to NQA-1 compliant manufacturing, Centrus Technical Solutions is your trusted, full-service partner.



Location: Oak Ridge, TN

www.centrusenergy.com

Founded: 1998

Principal/CEO: Larry Cutlip (Vice President Field Operations)

Major Customers: N/A

Federal Engagement: DOE, GAIN, NRC, Oak Ridge National Laboratory

Preferred Point of Contact: Mark McClure / mcclureml@centrusenergy.com / 865-241-7095

CERAMIC TUBULAR PRODUCTS



Ceramic Tubular Products develops and supplies very high temperature ceramic tubes and materials for existing and future nuclear and solar thermal applications.



Location: Lynchburg, VA

Founded: 2006

Principal/CEO: Jeffrey Halfinger

Major Customers: N/A

Federal Engagement: DOE, GAIN

Preferred Point of Contact: Jeffrey Halfinger / 424-239-1979

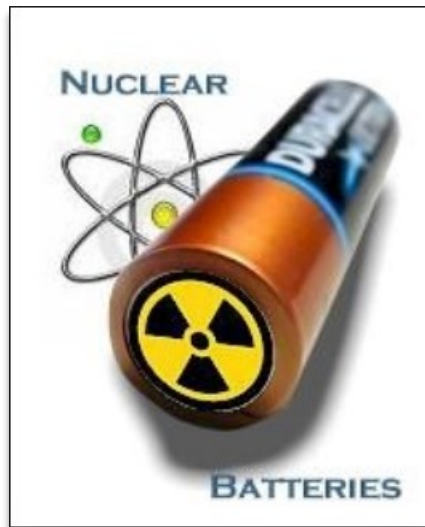
www.ctp-usa.com

ADVANCED NUCLEAR | SUPPLIER

COMPETITIVE ACCESS SYSTEMS, INC.



Competitive Access Systems (CAS), Inc. develops self-recharging nuclear battery technologies.



Location: Wylie, TX

Founded: 1996

Principal/CEO: Eric Delangis

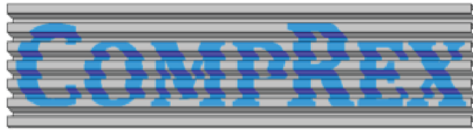
Major Customers: N/A

Federal Engagement: N/A

Preferred Point of Contact: Linda Delangis / ldelangis@neukenergy.com

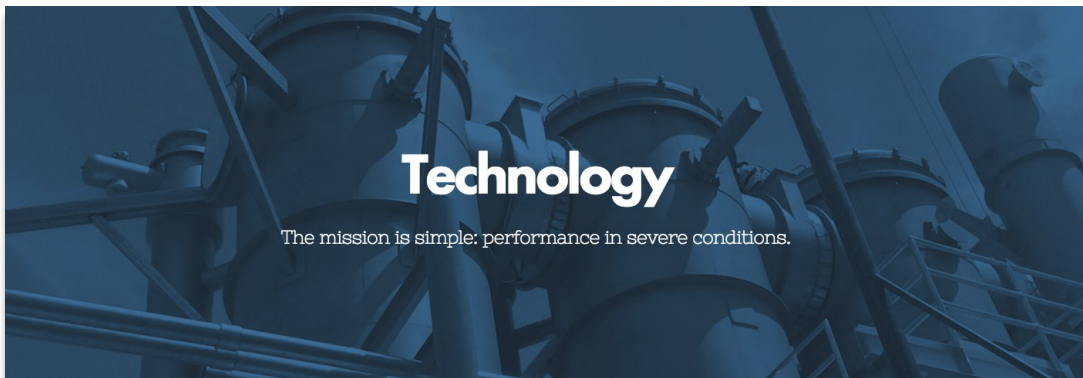
www.competitiveaccesssystems.com

COMPREX, LLC



FinRex® and ShimRex® Technologies

CompRex, LLC designs custom compact heat exchangers and compact heat exchange reactors for a wide range of chemical process applications where efficient heat transfer is critical.



Location: De Pere, WI

Founded: 2014

Principal/CEO: Zhijun Jia

Major Customers: N/A

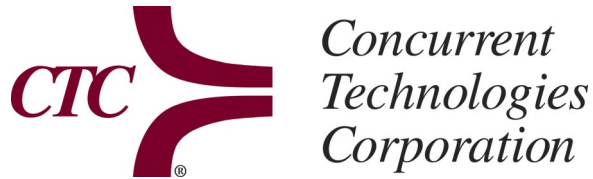
Federal Engagement: DOE, GAIN

Preferred Point of Contact: Zhijun Jia / Zhijun.jia@comprex-llc.com

www.comprex-llc.com

ADVANCED NUCLEAR | SUPPLIER

CONCURRENT TECHNOLOGIES CORPORATION



Concurrent Technologies Corporation (CTC) is recognized as one of the world's premier nonprofit applied scientific research and development organizations for the creation and implementation of advanced manufacturing technologies. The skills and processes developed at CTC are leveraged by the Center for Advanced Nuclear Manufacturing (CANM) to benefit both the emerging SMR/AR industry and the legacy reactor fleet.



Location: Johnstown, PA

Founded: 1987

Principal/CEO: Edward J. Sheehan, Jr.

Major Customers: N/A

Federal Engagement: DOE, GAIN

Preferred Point of Contact: Robert Akans / canm@ctc.com

www.ctc.com

CURTISS-WRIGHT

CURTISS - WRIGHT

Curtiss-Wright provides advanced products and services in support of the nuclear power industry.



ADVANCED NUCLEAR | SUPPLIER

Location: Offices nationwide

www.curtisswright.com

Founded: 1929

Principal/CEO: Jim Leachmane (Senior Vice President, General Manager of Nuclear Division)

Major Customers: N/A

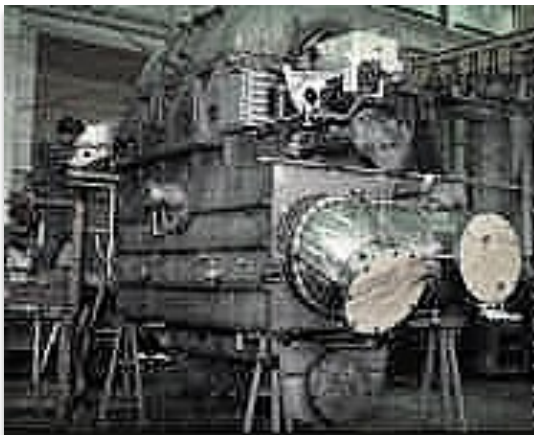
Federal Engagement: DOE, NRC

Preferred Point of Contact: Gary Wolski / info@curtisswright.com

DC FABRICATORS, INC.



DC Fabricators manufactures heat exchange equipment for the power generation and defense industries. DCF specializes in small to medium size cylindrical and rectangular condensers and heat exchangers for industrial and cogeneration applications, geothermal power plants, large main station condensers (to over 500,000 sq.ft.), process heat exchangers with pressures over 2,000 psi, and nuclear power systems. DCF's backs up its manufacturing capabilities with complete engineering analysis and design capabilities that conform to ASME Code, TEMA Standards, HEI Standards for Steam Condensers, and International Codes and Standards.



Location: Florence, NJ

www.dcfab.com

Founded: 1993

Principal/CEO: Gary Butler

Major Customers: US Navy, General Dynamics, Bechtel, Huntington Ingalls, Talen Energy, NPPD, Southern Illinois Power, Eastman Chemical

Federal Engagement: DOE, DOD

Preferred Point of Contact: Derrick Phillips / dphillips@dcfab.com / 609-499-3000 ext. 225

DUBOSE NATIONAL ENERGY SERVICES



An ASME certificate holder since 1977, DNES proudly offers quality products with exceptional (24/7) service. DNES carries one of the largest, most diversified inventories of nuclear qualified material. DNES stocks bar, plate, sheet, structural shapes, pipe, tubing, flanges, fittings, fasteners, Unistrut® metal framing products, weld rod and wire. DNES can support common carbon and alloy steel to highly corrosive-resistant stainless; nickel alloys to aluminum and bronze. In addition, DNES offers many value-added services from machining, fabricating, sawing, burning, cleaning, blasting, painting, heat treating, in-house testing (including NDE), and reverse engineering. DNES products and services are offered under a comprehensive Quality Program that is second to none. The DNES Quality Program is based on ASME Section III, NCA/ WA-3800 and 4000 and accreditation through our approved 'N-type' certificates (NA, NPT and NS) ; 10CFR50 Appendix B; ASME NQA-1; ANSI N45.2; CAN 3-Z299; & MIL-I-45208A. Additionally, DNES is also accredited under AISC and AWS, as well as ASME Section VIII (Pressure Vessels, Division 1 – U & R Stamps).



ADVANCED NUCLEAR | SUPPLIER

Location: Clinton, NC

www.dubosenes.com

Founded: 1990

Principal/CEO: Richard Rogers (President), Beau Laslo (Director of Sales), Doug Vickery (Director of Quality)

Major Customers: USA: All nuclear utilities, DOE, DOD, National Labs and ~300 OEM's/ Fabricators/EPC's who support USA nuclear programs. Canada: All nuclear utilities, National Labs and ~75 Canadian OEM's/Fabricators/EPC's who support Canada's nuclear programs. Worldwide: Several Utilities and OEM's/Fabricators/EPC's nuclear programs.

Federal Engagement: DOE, DOD

Preferred Point of Contact: Beau Laslo / beau.laslo@dubosenes.com / 910-590-2151 ext. 112

ENERCON



ENERCON

Excellence—Every project. Every day.

ENERCON is an architectural engineering, environmental, technical, and management services firm providing a broad range of professional services to private, public, and government sector clients both in the United States and internationally. Since 2002, ENERCON has been a leader in supporting deployment of new nuclear power plants world-wide.

ENERCON has supported clients in performing new nuclear plant site selection studies, evaluating alternative nuclear technologies, and developing design certification applications, license applications, and environmental reports. Our long list of satisfied clients has been built on our solid reputation as a premier provider of high quality, cost effective services. Our clients know that we continuously strive to be a firm that is known for our integrity, innovation, excellence, and responsiveness.



Location: Kennesaw, GA

Founded: 1983

Principal/CEO: John Richardson

Major Customers: N/A

Federal Engagement: N/A

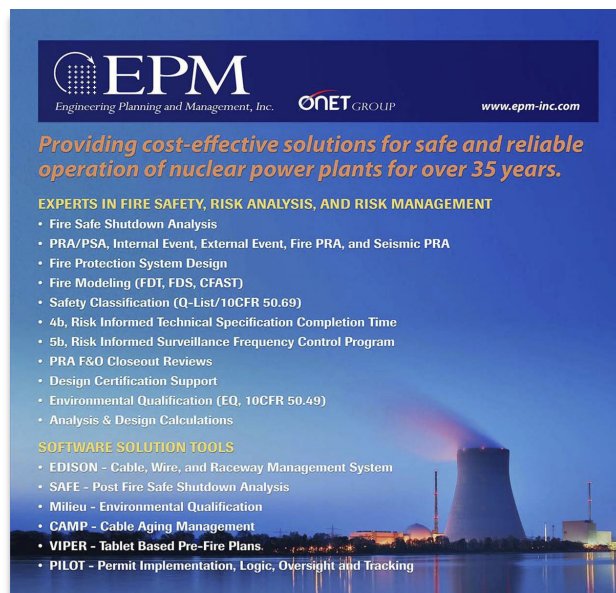
Preferred Point of Contact: John Durham / jdurham@enercon.com / 770-590-2176

www.enercon.com

ENGINEERING PLANNING and MANAGEMENT



EPM is a multi-discipline, ASME NQA-1:2015 and ISO 9001:2015 compliant, engineering company specializing in fire protection and fire modeling, probabilistic risk assessment (PRA), safe shutdown / electrical separation analysis, chemical process safety, and software development. Our cross-functional teams allow EPM to provide integrated specialty engineering and software solutions to assist our U.S. and international customers with regulatory compliance, design certification, risk management, and process efficiency at their facilities. We have built a reputation as a well-respected engineering services and software provider to U.S. and international customers for over 35 years.



Location: Framingham, MA

Founded: March, 1980

Principal/CEO: Robert Kalantari

Major Customers: N/A

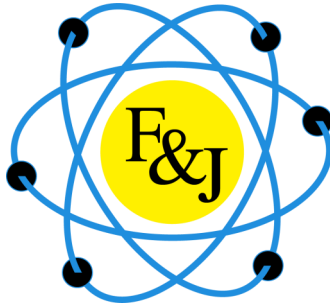
Federal Engagement: DOE, NRC

Preferred Point of Contact: Alan Jelalian / ahj@epm-inc.com / 508-532-7131

www.epm-inc.com

ADVANCED NUCLEAR | SUPPLIER

F&J SPECIALTY PRODUCTS, INC.



ISO9001:2015 certified manufacturer of traditional and microprocessor controlled air sampling and airflow calibration instruments, air sampling accessories and consumables. Products include portable and fixed-station low volume and high volume air samplers, PAS, tritium and C-14 systems. Consumables include charcoal and silver zeolite radioiodine collection cartridges and particulate filter media.



Location: Ocala, FL

Founded: 1979

Principal/CEO: Frank M. Gavila

Major Customers: N/A

Federal Engagement: DOE, EPA, Other

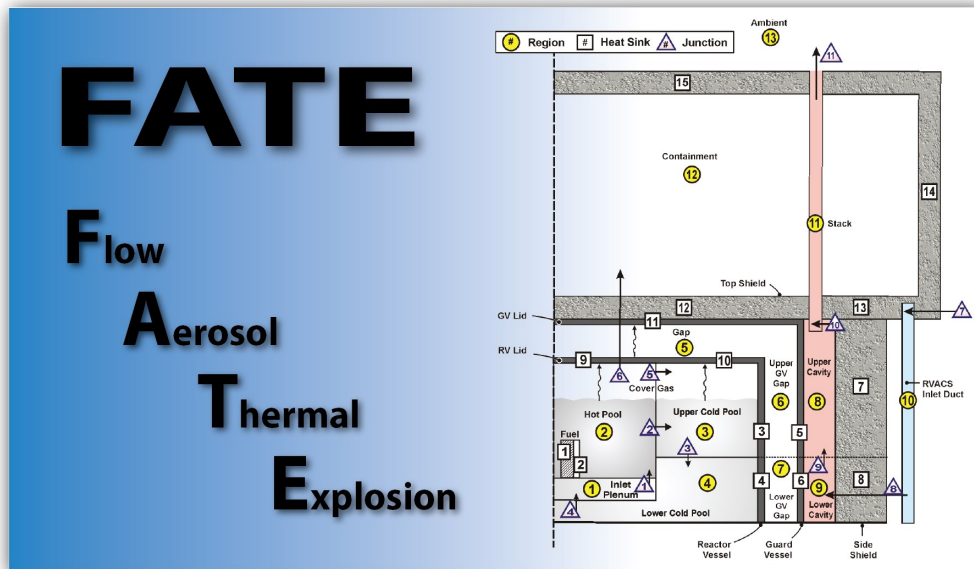
Preferred Point of Contact: fandj@fjspecialty.com / 352-680-1177

www.fjspecialty.com

FAUSKE & ASSOCIATES, LLC



FAI specializes in modeling and analyzing both power and non-power nuclear facilities, including light water and liquid metal cooled reactors (LMRs), spent fuel, legacy waste processing, and storage facilities. FAI developed FATE, a facility and process modeling code originally created to support design and safety analyses of spent fuel, tank waste, vitrification, and special materials at DOE's Hanford site. Recently, under the GAIN initiative, FATE was coupled with a LMR accident analysis code to provide mechanistic source term analysis capability for licensing purposes.



ADVANCED NUCLEAR | SUPPLIER

Location: Burr Ridge, IL

Founded: 1980

Principal/CEO: John Fasnacht

Major Customers: Westinghouse, Kairos, Sellafeld, Hanford, Korea Atomic Research Institute (KAERI)

Federal Engagement: DOE, GAIN, NRC

Preferred Point of Contact: Jim Burelbach / burelbach@fauske.com

www.fauske.com

FISHER CONTROLS



EMERSON™

Fisher valve and instrument technologies are born from Emerson's passion to increase your process safety and efficiency, by defining the industry with more than 135 years of trusted innovations and forging the future of flow control solutions. We know the consequences of process failure are great, that's why we have an unwavering commitment to standards and processes that ensure innovative and reliable product designs. Many years from now, as the Fisher™ brand is put onto products, users will continue to know it stands for integrity.



Location: Marshalltown, IA

Founded: 1880

Principal/CEO: Kevin G. Meyer (Principal), Michael Train (CEO)

Major Customers: All sanctioned nuclear utilities across the globe

Federal Engagement: NRC

Preferred Point of Contact: Charlie Harris / Charlie.harris@emerson.com / 641-754-3220

www.fisher.com

FISONIC ENERGY SOLUTIONS - POWER SYSTEMS DIVISION



Fisonic Energy Solutions designs pumping systems for power plants that require only heat to operate (no electricity), and use waste heat as a power source where possible.



Location: Waltham, MA

Founded: 2016

Principal/CEO: Ed Pheil (CTO)

Major Customers: N/A

Federal Engagement: Other

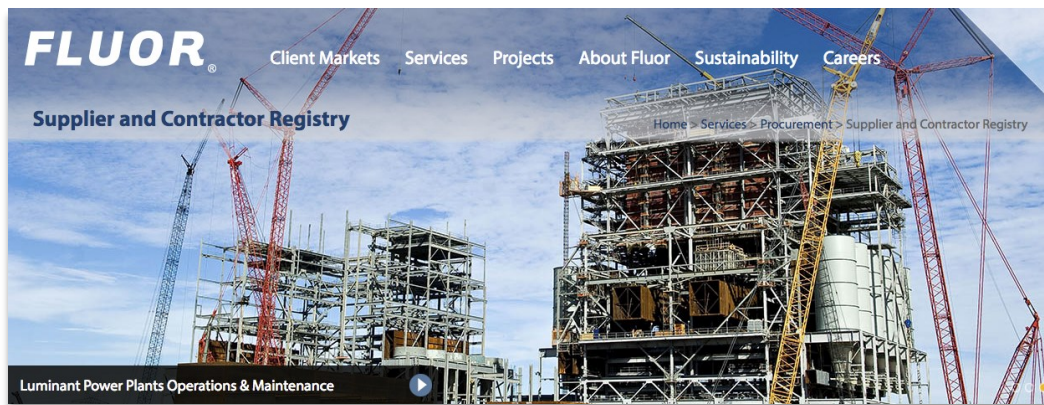
Preferred Point of Contact: Ed Pheil / ed.pheil@fisonic.us

www.fisonicsolutions.com

ADVANCED NUCLEAR | SUPPLIER

FLUOR**FLUOR®**

Fluor is one of the world's largest publicly-traded engineering, procurement, fabrication, construction (EPFC) and maintenance companies, offering integrated solutions for clients' projects. For the past 70 years, Fluor has executed some of the most complex and challenging projects in the nuclear industry.



Location: Global

Founded: 2012

Principal/CEO: David Seaton

Major Customers: N/A

Federal Engagement: DOE, NRC, Other

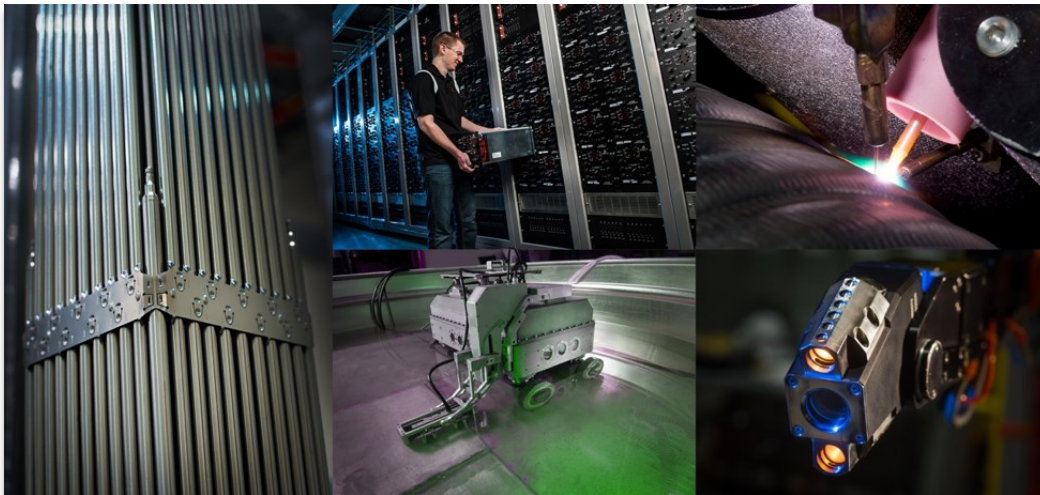
Preferred Point of Contact: Brad Porlier / brad.porlier@fluor.com

www.fluor.com

FRAMATOME

framatome

Framatome is a major international player in the nuclear energy market recognized for its innovative solutions and value-added technologies for designing, building, maintaining, and advancing the global nuclear fleet. The company designs, manufactures, and installs components, fuel and instrumentation and control systems for nuclear power plants and offers a full range of reactor services. Framatome is innovating to design the reactors of tomorrow. Our activities include reactor design, systems engineering, metallic fuel development, and industry counsel to help progress licensing and commercialization of advanced reactors in the United States.



Location: Nationwide

Founded: 1989

Principal/CEO: Gary Mignogna

Major Customers: N/A

Federal Engagement: DOE, GAIN, ARPA-E, NRC, Other

Preferred Point of Contact: Darryl Gordon / Darryl.gordon@framatome.com / 434-832-5199

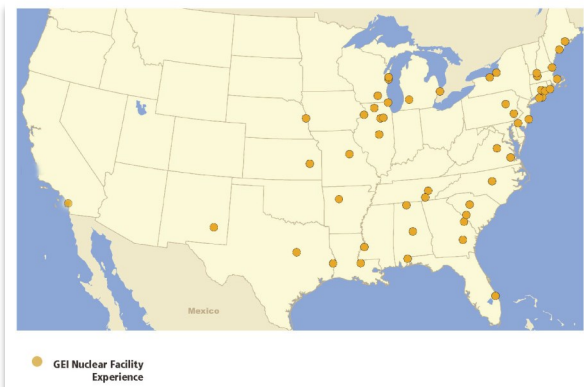
www.framatome.com

ADVANCED NUCLEAR | SUPPLIER

GEI CONSULTANTS, INC.



Our multi-disciplined team of engineers and scientists deliver integrated geotechnical, environmental, water resources, and ecological engineering solutions to diverse clientele nationwide. GEI recognizes the need to provide safe, clean, secure, base load electric power to influence our environment and has made a commitment to provide resources to support this need. GEI provides services with a focus on client success by integrating experienced project managers into our clients' team. Our services for nuclear facilities include: Site Characterization/Selection; Seismic Stability and Liquefaction Analysis; Foundation Investigation; Design for Static and Seismic Loading; Vibration Analysis; Excavation Support; Geohydrologic and Hydrologic; Licensing Support; Embankment Design and Rehabilitation; Preparation of Plans and Specifications; Field Instrumentation Installation and Monitoring; Construction Observation and Consultation; Environmental and Ecological Services; and Decommissioning. GEI has had a Nuclear Quality Assurance Manual since 1972 and we provide all our services under a client-audited Quality Assurance Program (QAP) that meets the requirements of 10 CFR Part 50 Appendix B, ASME NQA-1-1994 and ANSI N45.2- 1977. We have firmly established a reputation amongst the industry for achieving excellent results, inspired problem-solving, and outstanding client satisfaction.



Location: Woburn, MA

Founded: 1970

Principal/CEO: Ron Palmieri

Major Customers: Holtec International, TVA, Entergy, Exelon, Bechtel, and Orano

Federal Engagement: DOE, NRC, USACE, EPA, DOJ, TVA

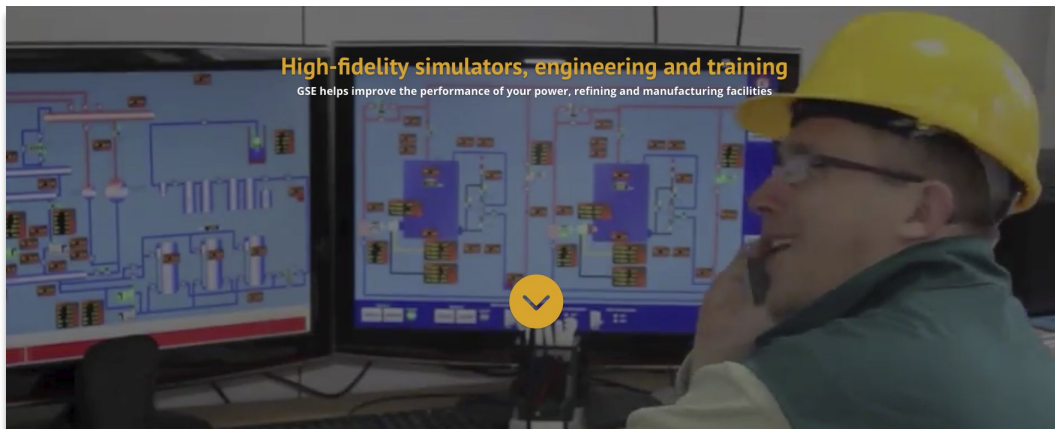
Preferred Point of Contact: Robert N. Lambe / rlambe@geiconsultants.com; Chad R. Conti / cconti@geiconsultants.com

www.geiconsultants.com

GSE PERFORMANCE SOLUTIONS, INC.



GSE is the world leader in simulation systems and solutions for the nuclear power industry. GSE's technology allows the end user to conduct engineering and design studies, conduct "what if" analyses and train personnel to exacting standards. GSE's technology is critical for customers to improve load factors, reduce operational risk and lower operating costs.



ADVANCED NUCLEAR | SUPPLIER

Location: Sykesville, MD

Founded: 1994

Principal/CEO: Kyle Loudermilk

Major Customers: N/A

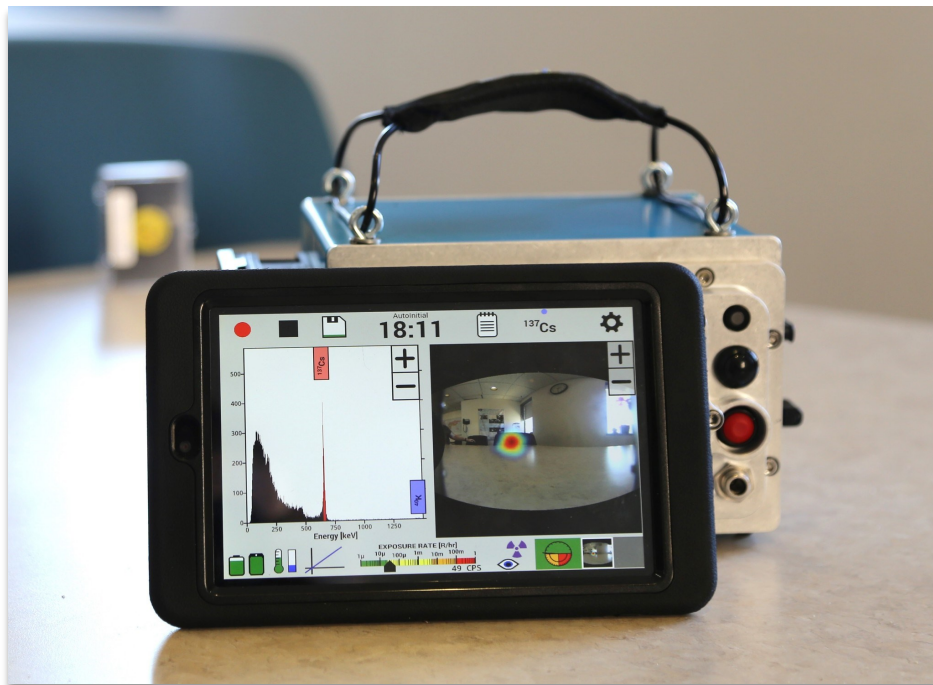
Federal Engagement: DOE, GAIN, ARPA-E, NRC

Preferred Point of Contact: Jay Umholtz / jay.umholtz@gses.com

www.gses.com

H3D, INC.

H3D offers the world's highest-performance imaging spectrometers. Quickly identifying and localizing gamma-ray sources with a single measurement, H3D is revolutionizing how measurements are performed. H3D detectors are used in over half of U.S. nuclear power plants.



Location: Ann Arbor, MI

Founded: N/A

Principal/CEO: Willy Kaye

Major Customers: N/A

Federal Engagement: DOE

Preferred Point of Contact: Andy Boucher / andy@h3dgamma.com / 734-661-6416

www.h3dgamma.com

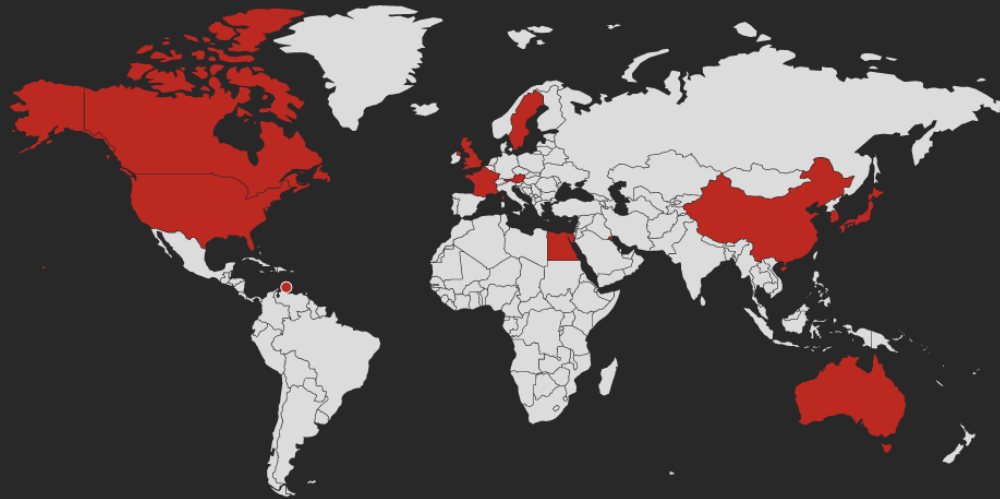
HIGHBRIDGE ENERGY DEVELOPMENT



High Bridge Energy Development conceptualizes and executes projects for advanced reactors and SMRs.

CLIENTS

High Bridge has supported clients on six continents with Nuclear, Fossil, Fusion and Science energy projects in Australia, Italy, Japan, Spain, the UK, Korea, South Africa, and France. Since 2006, HBA has supported the ITER Organization, a major international collaboration in Cadarache, France with the aim of demonstrating the scientific and technical feasibility of fusion technology as a reliable and sustainable low carbon footprint energy source.



Location: Nationwide

Founded: 2011

Principal/CEO: Steve R. Maehr

Major Customers: N/A

Federal Engagement: DOE, GAIN, ARPA-E, NRC

Preferred Point of Contact: Philip Moor / Philip.moor@hba-inc.com / 770-729-8755

www.hba-inc.com

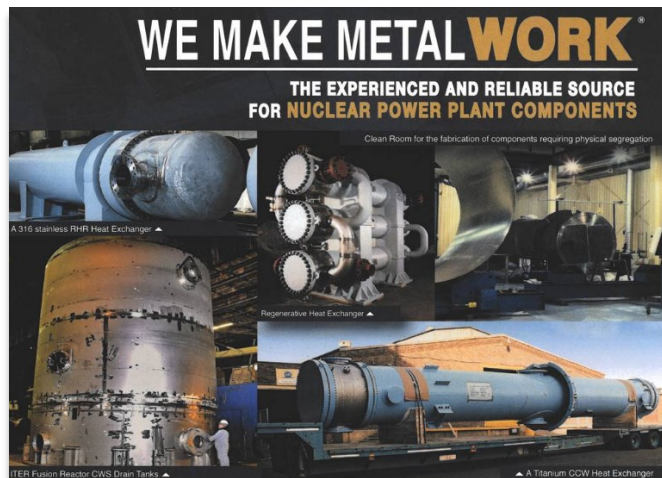
ADVANCED NUCLEAR | SUPPLIER

JOSEPH OAT CORPORATION



Joseph Oat is a world renowned OEM designer and manufacturer of fabricated ASME Section VIII and ASME Section III / NQA-1 nuclear safety-related heat exchangers, pressure vessels, tanks, canisters/casks, and other products for the Nuclear Power and Radioactive Waste Processing Industries.

Joseph Oat's range of products is quite extensive and our successful nuclear experience is unmatched in the industry. Joseph Oat excels in the supply critical heat exchangers such as regenerative & non-regenerative, residual heat removal (RHR), spent fuel pool coolers, emergency diesel generator (EDG) coolers, lube oil coolers, containment spray, letdown, SG blowdown, and large component cooling water (CCW) heat exchangers. Other product offerings include condensate tanks, air receiver tanks, accumulator vessels, liquid control tanks, surge tanks, containment air coolers, pulsation dampeners, suction stabilizers, oil tanks, fuel tanks, strainers, flow elements - orifice plate & venturi type, flow meters, structural weldments, spent fuel/rad-waste canisters/casks, and other specialty items to nuclear power utilities/plants, NSSS designers, nuclear A&E/EPC firms, the DOE national laboratories/repositories, and DOD weapons plants.



Location: Camden, NJ

Founded: January 1788

Principal/CEO: Ron Kaplan

Major Customers: DOE (National Laboratories, Repositories, Universities, etc.), GE-Hitachi, Orano, US Nuclear Power Utilities, Westinghouse

Federal Engagement: DOE, GAIN, NRC, Other, DOD

Preferred Point of Contact: John McDonald / j.mcdonald@josephoat.com / 856-371-0009

www.josephoat.com

LIGHTBRIDGE CORPORATION



Lightbridge develops next generation fuel technology.

At Lightbridge we are developing a way to
impact the world's climate and energy
problems soon enough to make a difference.



ADVANCED NUCLEAR | SUPPLIER

Location: Reston, VA

Founded: 2006

Principal/CEO: Seth Grae

Major Customers: N/A

Federal Engagement: DOE, NRC

Preferred Point of Contact: Seth Grae / 571-730-1200

ltbridge.com

LPI, INC.



LPI, Inc. was established in New York City in 1885 to provide services to a fast evolving industrial nation. We began by doing chemical assays for a variety of industries. In the 1950s, a metallurgical laboratory, metallurgical services, and failure analyses were added. Over time, this expanded to include stress analysis, fracture mechanics, and other services that made us a full-service consulting engineering firm.

LPI, Inc. has continually expanded our staff and capabilities to enable a broad range of expertise. In turn, our clients trust us to solve problems that range from challenging to extraordinary. With over a century of service, LPI, Inc. has a long held, outstanding, and global reputation for engineering excellence and cost effective problem solving.

Whether it involves the analysis of the New York World Trade Center disaster, the breakup of an oil tanker in the North Atlantic, the weakening of a stadium roof structure, or the cracking of a critical component at a nuclear power facility, every industrial sector today faces a growing need to continue operating existing structures and current equipment in a safe, reliable, and cost effective manner. Our business mission is to assess and deliver the most cost effective solutions to our clients' engineering problems. To accomplish this, we've developed a multi-disciplined staff of technical specialists with expertise in many specialized industrial sectors.



Location: New York, NY

Founded: 1885

Principal/CEO: Robert Vecchio

Major Customers: N/A

Federal Engagement: DOE, ARPA-E, GAIN, NRC

Preferred Point of Contact: Jennifer Labeaf / jlabeaf@lpiny.com / 509-420-7684

www.lpiny.com

MAIDANA RESEARCH



MAIDANA RESEARCH is a small business concern dedicated to engineering design and scientific research. Its main set of activities rely on computer aided design, engineering and manufacturing (CAD/CAE/CAM), basic and applied research in the engineering and physical sciences, and consulting in topics related to industries and advanced technologies deemed critical to national security and to long term economic development including, but not limited to, aerospace, satellites, nuclear technologies, defense-related industries, and advanced energy systems.

The small business innovation research awards 2015, 2016 & 2019 in advanced nuclear technologies allowed us to obtain a vast experience on the research, design and development of electromagnetic pumps for liquid metal and molten-salt reactors while developing in-house software and hybrid-manufacturing techniques.



Location: ID, UT, Switzerland, Thailand

Founded: 2014

Principal/CEO: Carlos O. Maidana

Major Customers: N/A

Federal Engagement: DOE, GAIN, NASA, DoD, Other

Preferred Point of Contact: management@maidana-research.com

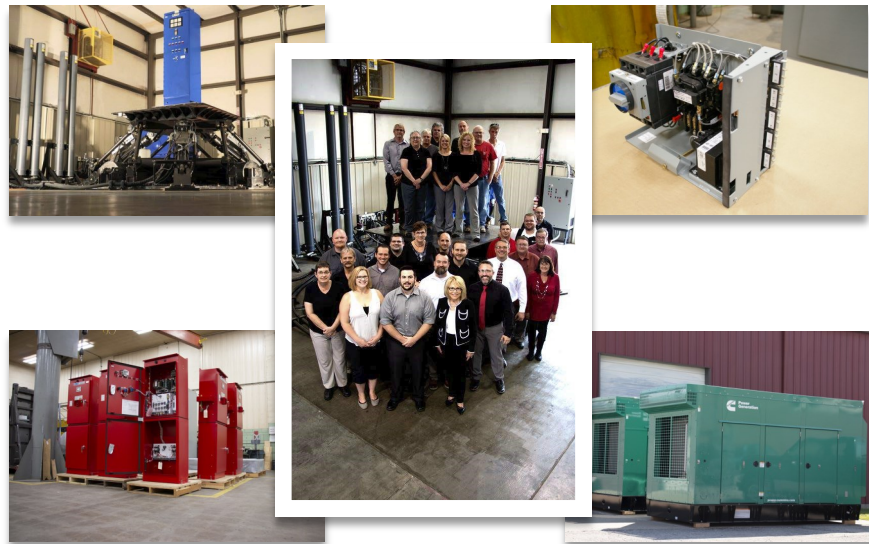
www.maidana-research.com

ADVANCED NUCLEAR | SUPPLIER

NUTHERM INTERNATIONAL, INC.



Nutherm is a small business concern serving the DOE and commercial nuclear power industry since 1979. We specialize in the design, manufacture, qualification, and commercial-grade dedication of systems and components for electrical power, control, and instrumentation. Nutherm's in-house lab features electrical performance, accelerated thermal aging, HELB, LOCA, and seismic testing along with numerous specialized testing devices. Nutherm maintains a Quality Assurance Program to support its products and services for safety-class and safety-significant applications. The Nutherm audited Quality Assurance Program meets the requirement of ASME NQA-1, 10 CFR 50 Appendix B, 10 CFR Part 21, ANSI/ASME Standard N45.2, and DOE Order 414.1D.



Location: Mt. Vernon, IL

Founded: 1976

Principal/CEO: Wade Bowlin

Major Customers: Los Alamos National Laboratory, Oak Ridge National Laboratory, Savannah River Site, Hanford Site

Federal Engagement: DOE, NRC

Preferred Point of Contact: sales@nutherm.com

www.nutherm.com

NUVISION ENGINEERING, INC.



NuVision Engineering is an engineering and technology services company specializing in nuclear applications. We provide technically advanced engineering solutions and services for governments and businesses worldwide. We also design and deploy rad-hardened robotic manipulators for use in radioactive environments, and advanced process systems to manage radioactive waste. Our customers include the U.S. and international governments, utility companies, and medical research facilities. Our experienced staff and portfolio enable us to provide solutions to complex problems safely, quickly, and cost effectively. NuVision was founded in 1971 and is headquartered in Pittsburgh, Pennsylvania, with major operational facilities near Charlotte, North Carolina.



Location: Pittsburgh, PA

Founded: 1971

Principal/CEO: Brian Scott Beley

Major Customers: U.S. and international governments, utility companies, and medical research facilities

Federal Engagement: DOE, GAIN, ARPA-E, NRC, Other

Preferred Point of Contact: Erich Keszler / ekeszler@nuvisioneng.com; Greg Lazzaro / glazzaro@nuvisioneng.com

nuvisioneng.com

ADVANCED NUCLEAR | SUPPLIER

POWER SYSTEM SENTINEL TECHNOLOGIES, LLC

ADVANCED NUCLEAR | SUPPLIER



Born out of a need to protect the nuclear industry, PSStech was founded to provide nuclear generating stations with open phase protection. PSStech provides design, manufacturing, and engineering services to the electric power industry and large industrial and commercial customers.



Location: Warrior, AL

Founded: 2014

Principal/CEO: Greg Franklin

Major Customers: U.S. Nuclear Power Plants, Electric Power Utilities, Large Industrial & Commercial Facilities

Federal Engagement: DOE, GAIN, NRC

Preferred Point of Contact: Chris Melhorn / cmelhorn@psstech.com / 865-456-0602

www.psstech.com

PRECISION CUSTOM COMPONENTS, LLC



PCC has been manufacturing large hydro, fossil, and nuclear power generation equipment in our York, PA location for over 140 years. We have fabricated NSSS vessels and other equipment for the nuclear and process industries including Westinghouse, GE, Framatome, ExxonMobil, Dow DuPont, U.S. Navy, DOE, National Labs, electric utilities, and others. Our nuclear manufacturing history dates back to the industry's origins with Shippingport-1 and continues to this day with SMR, Gen III+ and Gen IV reactor hardware and design support.



ADVANCED NUCLEAR | SUPPLIER

Location: York, PA

Founded: 1876

Principal/CEO: Gary Butler

Major Customers: Westinghouse, Framatome, NuScale, BWXT, US Navy, Bechtel, General Dynamics, Northrop Grumman, Dow DuPont, ExxonMobil, US DOE, and National Laboratories

Federal Engagement: DOE, NRC, DOD, NASA

Preferred Point of Contact: Jim Stouch / jstouch@pcc-york.com / 717-434-1802

www.pcc-york.com

SOUTHERN NUCLEAR DEVELOPMENT, LLC



Southern Nuclear

Southern Nuclear Development, a subsidiary of Southern Nuclear Operating Company, pursues partnerships across the industry to drive the success of advanced nuclear technologies to be deployed as we move toward low- to no- carbon operations by 2050 — benefiting Southern Company customers for years to come. Southern Nuclear Development leverages decades of experience and research in nuclear operations, engineering, licensing and development to help advanced nuclear developers execute each phase of their strategy, from concept to commercial operation.



Location: Birmingham, AL

Founded: N/A

Principal/CEO: Stephen E. Kuczynski

Major Customers: N/A

Federal Engagement: DOE, NRC, EPA, FEMA

Preferred Point of Contact: Ben Carmichael / bmcarmic@southernco.com / 205-992-5944

www.southernnuclear.com

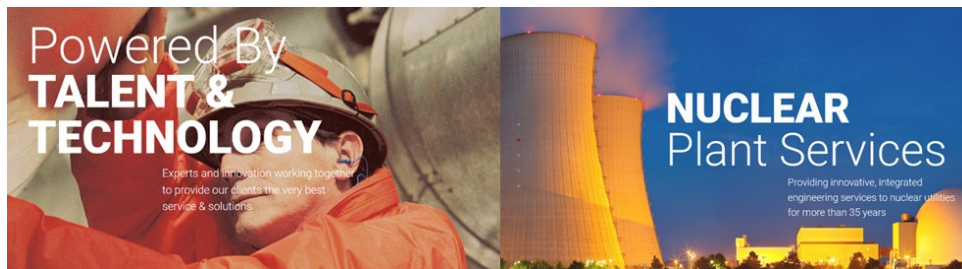
STRUCTURAL INTEGRITY ASSOCIATES, INC.



Structural Integrity Associates, Inc. is an internationally recognized leader in materials science, engineering mechanics, structural analysis, fuel performance and chemistry. Our value to our customer is the prevention and control of structural and mechanical failures to ensure long term structural health of critical facilities.

Structural Integrity's expertise encompasses a broad range of issues critical to the success of nuclear power plants, as well as fossil-fired plants, oil & gas pipelines, and civil infrastructure, worldwide. Structural Integrity is comprised of industry leading experts with experience in many facets of the energy industry, engineering, science and technical leadership. They exemplify our innovative direction and core values to deliver the best-in-value service and solutions to our clients. Using a multidisciplinary approach, our experts bring a fresh perspective and proven solutions for condition assessment, component integrity, metallurgical & failure analysis, and regulatory support.

With decades of consulting experience throughout the power and energy sector, and with our staff of multidisciplinary experts, Structural Integrity understands the complexities of today's evolving regulatory landscape and the interaction with core technical and operational considerations of power plants. We can help ensure compliance with regulations, benchmark against industry best practices, and make technically and operationally informed recommendations to help our clients implement plans and roadmaps for dealing with key code and regulatory issues.



Location: San Jose, CA

Founded: April 1983

Principal/CEO: Laney Bisbiee

Major Investors: U.S. and International power generation, U.S. National Laboratories

Major Customers: N/A

Federal Engagement: DOE, ARPA-E, GAIN, Other, LWRS, NEAMS

Preferred Point of Contact: Rob Choromokos / rchoromokos@structint.com / 630-846-6787

www.structint.com

ADVANCED NUCLEAR | SUPPLIER

STUDSVIK SCANDPOWER

Studsvik

Studsvik Scandpower provides nuclear simulation software and services which manage fuel from arrival on site to departure in casks. Key software products include CASMO/SIMULATE, GARDEL, S3K, S3R, MARLA, SNF, and CASKLOAD.



Location: Global

Founded: N/A

Principal/CEO: Steve Freel

Major Customers: N/A

Federal Engagement: DOE, GAIN, ARPA-E, NRC, Other

Preferred Point of Contact: Art Wharton / art.wharton@studsvik.com

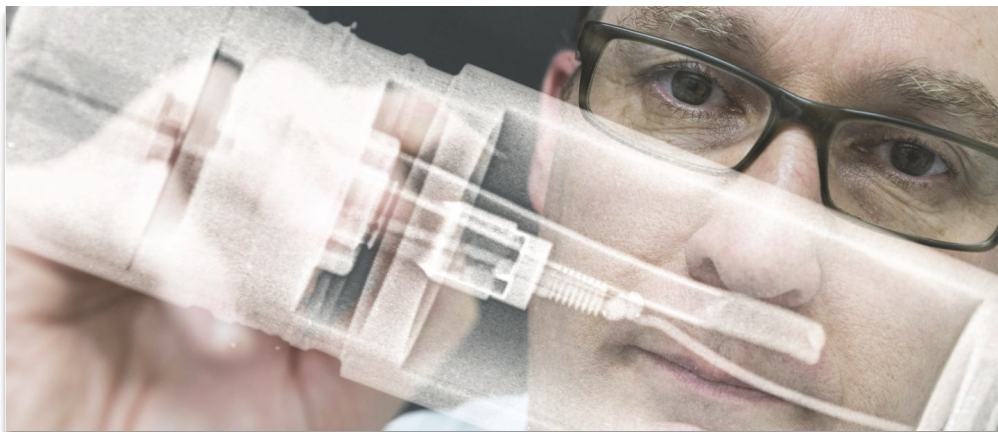
www.studsvik.com

ULTRA ELECTRONICS LIMITED



Ultra Electronics is a world-leading group of businesses operating in the Defense & Aerospace, Security & Cyber, Transport, and Energy markets. With over 60 years' experience, its Energy business offers a defense-in-depth approach to the nuclear industry focusing on systems requiring formal safety justification or qualification.

It has a core capability of high temperature neutron flux sensors and associated protection electronics from its long history supplying the UK's advanced gas cooled reactors. In North America it also provides nuclear qualified process sensors with over 80% of all reactors relying exclusively on its temperature devices for critical coolant monitoring.



Location: Worldwide

Founded: 1993

Principal/CEO: Nick Gaines (President, Ultra Electronics Energy)

Major Customers: N/A

Federal Engagement: DOE, NRC

Preferred Point of Contact: Adam Gaither / adam.gaither@ultra-nspi.com

www.ultra-electronics.com

ADVANCED NUCLEAR | SUPPLIER

NATIONAL LABORATORIES

ARGONNE NATIONAL LABORATORY



Argonne National Laboratory is a multidisciplinary science and engineering research center, where scientists and engineers work together to answer the biggest questions facing humanity, from how to obtain affordable clean energy to protecting ourselves and our environment. Argonne was born out of the University of Chicago's work on the Manhattan Project in the 1940s. Ever since that time, the Laboratory's goal has been to make an impact- from the atomic to the human to the global scale. Argonne pioneered the application of nuclear fission for energy generation and maintains leading-edge experimental and computational capabilities for developing innovative reactor and fuel cycle systems.



Location: Lemont, IL

Founded: 1946

Principal/CEO: Paul K. Kearns (Director)

Federal Engagement: DOE-SC, DOE-NE, NNSA, DOE-EERE, NRC, ARPA-E, DOD, DHS

Preferred Point of Contact: Hussein S. Khalil / hkhalil@anl.gov / 630-252-7266

www.anl.gov

ADVANCED NUCLEAR | NATIONAL LABORATORY

BROOKHAVEN NATIONAL LABORATORY



Brookhaven National Laboratory conducts research and development related to nuclear technologies (reactors and accelerator-driven systems), advanced materials for nuclear applications, proliferation resistance and physical protection, reliability and risk assessment, and advanced modeling techniques for reactor simulation and energy systems.



Location: Upton, NY

Founded: 1947

Principal/CEO: Doon Glbbs

Federal Engagement: DOE, GAIN, ARPA-E, NRC, Other

Preferred Point of Contact: William C. Horak / horak@bnl.gov / 631-344-2627

www.bnl.gov

IDAHO NATIONAL LABORATORY



Idaho National Laboratory (INL) is the nation's lead laboratory for nuclear energy research, development, demonstration and deployment. INL's nuclear energy researchers work with unparalleled irradiation and post-irradiation examination, fuel fabrication and materials testing facilities to develop new fuels to extend the life of the current fleet and fuels and materials for advanced nuclear reactor designs. INL leads many key initiatives for DOE's Office of Nuclear Energy, including Gateway for Accelerated Innovation in Nuclear (GAIN), the Light Water Reactor Sustainability (LWRS) program and Nuclear Science User Facility (NSUF).



ADVANCED NUCLEAR | NATIONAL LABORATORY

Location: Idaho Falls, ID

Founded: 1949

Principal/CEO: Mark Peters

Federal Engagement: DOE, GAIN, ARPA-E, NSUF, NEUP, NRC

Preferred Point of Contact: Jess Gehin / jess.gehin@inl.gov / 208-526-3486;

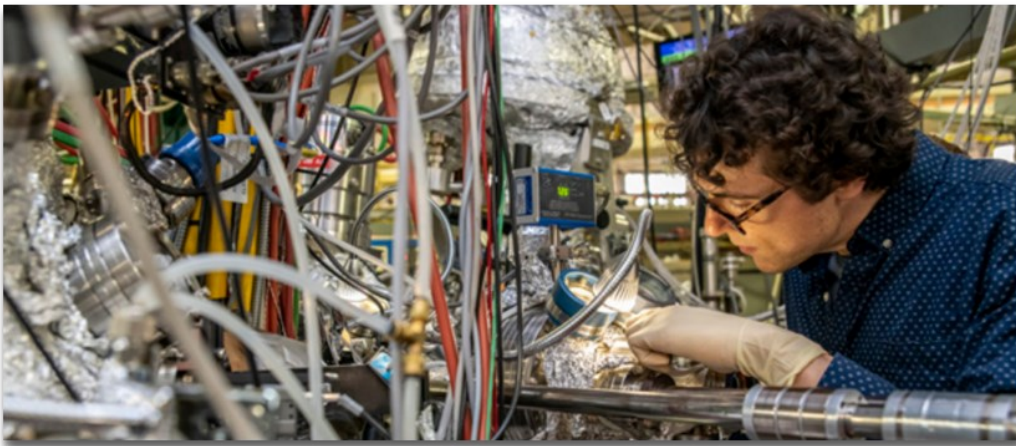
www.inl.gov

LAWRENCE BERKELEY NATIONAL LABORATORY

ADVANCED NUCLEAR | NATIONAL LABORATORY



Lawrence Berkeley National Laboratory specialized in science and technology development for energy applications.



Location: Berkeley, CA

Founded: 1931

Principal/CEO: Michael Witherell

Federal Engagement: DOE, GAIN, ARPA-E, NRC, Other

Preferred Point of Contact: Peter Hosemann / peterh@berkeley.edu / 510-717-5752

www.lbl.gov

LAWRENCE LIVERMORE NATIONAL LABORATORY



For more than 60 years, the Lawrence Livermore National Laboratory (LLNL) has applied science and technology to make the world a safer place.

Livermore's defining responsibility is ensuring the safety, security and reliability of the nation's nuclear deterrent. Yet LLNL's mission is broader than stockpile stewardship, as dangers ranging from nuclear proliferation and terrorism to energy shortages and climate change threaten national security and global stability. The Laboratory's science and engineering are being applied to achieve breakthroughs for counterterrorism and nonproliferation, defense and intelligence, energy and environmental security.



Location: Livermore, CA

Founded: 1952

Principal/CEO: Bill Goldstein

Federal Engagement: DOE, NRC, ARPA-E, GAIN, NNSA, DHS, Other

Preferred Point of Contact: Kiel Holliday / holliday7@llnl.gov / 925-422-4074

www.llnl.gov

ADVANCED NUCLEAR | NATIONAL LABORATORY

LOS ALAMOS NATIONAL LABORATORY



Los Alamos National Laboratory's mission is to solve national security challenges through scientific excellence. The Laboratory conducts fundamental nuclear materials research for future nuclear reactor designs and fuel cycle options, develops detection technologies needed for global nuclear materials management and supports nuclear energy initiatives through advanced modeling and simulation.

This work includes:

- Fundamental advances in nuclear fuels and cladding materials
- Nonproliferation safeguards
- Reactor concepts



Location: Los Alamos, NM

Founded: 1943

Principal/CEO: Terry Wallace

Federal Engagement: DOE, GAIN, NRC, ARPA-E

Preferred Point of Contact: DV Rao / dvrao@lanl.gov / 505-667-5098

www.lanl.gov

OAK RIDGE NATIONAL LABORATORY



Oak Ridge National Laboratory (ORNL) is the U.S. Department of Energy's largest science and energy laboratory with signature strengths in computing, materials, neutron science, and nuclear science and technology. ORNL provides science and technology capabilities and services to extend the life of our existing light water reactor fleet, create and develop concepts for advanced reactor technologies, develop advanced nuclear fuels and fuel cycles, and support modernization of the U.S. nuclear regulatory infrastructure.



Location: Oak Ridge, TN

Founded: 1943

Principal/CEO: Thomas Zacharia

Federal Engagement: DOE, GAIN, ARPA-E, NRC, Other

Preferred Point of Contact: Kenneth Tobin / tobinkwjr@ornl.gov / 865-574-5267;

Andrew Worrall / worralla@ornl.gov / 865-576-9369

www.ornl.gov

ADVANCED NUCLEAR | NATIONAL LABORATORY

PACIFIC NORTHWEST NATIONAL LABORATORY

ADVANCED NUCLEAR | NATIONAL LABORATORY



Pacific Northwest National Laboratory (PNNL) conducts research and development across the nuclear fuel cycle to support DOE and industry in development of advanced materials, advanced fuels and Gen IV reactors for the next generation of nuclear energy. Drawing on decades of expertise in nuclear science, engineering and regulation, along with its Category 2 Nuclear Facility assets, PNNL supports technology development across the TRL spectrum.



Location: Richland, WA

Founded: 1965

Principal/CEO: Steven Ashby

Federal Engagement: DOE, GAIN, NRC, ARPA-E, NNSA, DHS

Preferred Point of Contact: Mark Nutt / mark.nutt@pnnl.gov / 509-375-2984

nuclearenergy.pnnl.gov

SANDIA NATIONAL LABORATORIES



Sandia National Laboratories

A Federally Funded Research and Development Center for the National Nuclear Security administration with a strong science, technology and engineering foundation enables Sandia's mission to develop advanced technologies to ensure global peace through a capable research staff working at the forefront of innovation, collaborative research with universities and companies and discretionary research projects with significant potential impact. Sandia National Laboratories' unique mission responsibilities in the nuclear weapons program create a foundation from which they leverage capabilities, enabling them to solve complex national security problems.



Location: Albuquerque, NM

Founded: 1949

Principal/CEO: Steven Younger

Federal Engagement: DOE, GAIN, ARPA-E, NRC, Other

Preferred Point of Contact: Richard Griffith / rogrif@sandia.gov / 505-844-8232;

Patrick Mattie / pdmatti@sandia.gov / 505-284-4796

www.sandia.gov

ADVANCED NUCLEAR | NATIONAL LABORATORY

SAVANNAH RIVER NATIONAL LABORATORY



Savannah River National Laboratory (SRNL) has core competencies in nuclear materials management and advanced materials design, manufacture, characterization and testing. SRNL has many unique laboratory facilities enabling the safe study and handling of nuclear materials and nuclear fuel as well as ultra-sensitive measurement and analysis of radioactive materials.



Location: Aiken, SC

Founded: 1951

Principal/CEO: Vahid Majidi

Federal Engagement: DOE, GAIN, ARPA-E, NRC

Preferred Point of Contact: Thad Adams / thad.adams@srnl.doe.gov / 803-725-5510

srnl.doe.gov

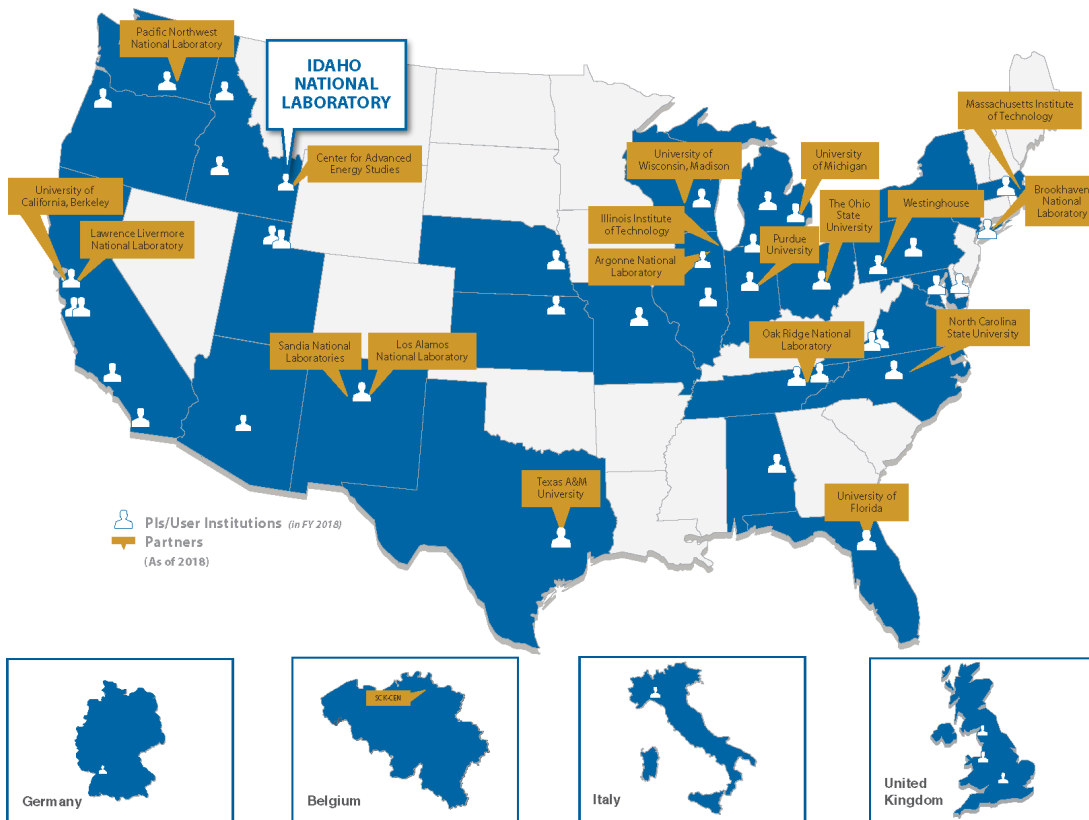
RESOURCES

NUCLEAR SCIENCE USER FACILITIES



The Nuclear Science User Facilities (NSUF) offers unparalleled research opportunities for nuclear energy researchers. Users are provided access (at no cost to the researcher) to world-class nuclear research facilities, technical expertise from experienced scientists and engineers, and assistance with experiment design, assembly, safety analysis and examination.

Access to NSUF's 49 facilities at 21 partner institutions is awarded through two competitive peer-reviewed processes, Consolidated Innovative Nuclear Research (CINR) and the Rapid Turnaround Experiment (RTE). NSUF staff is available to help any researcher who desires to submit a proposal. Submitted proposals should be consistent with the DOE-NE mission and its programmatic interests. These include light water reactor sustainability, fuel cycle research and development, advanced modeling and simulation, and advanced reactor technology programs. All NSUF research must be non-proprietary and results are expected to be published.



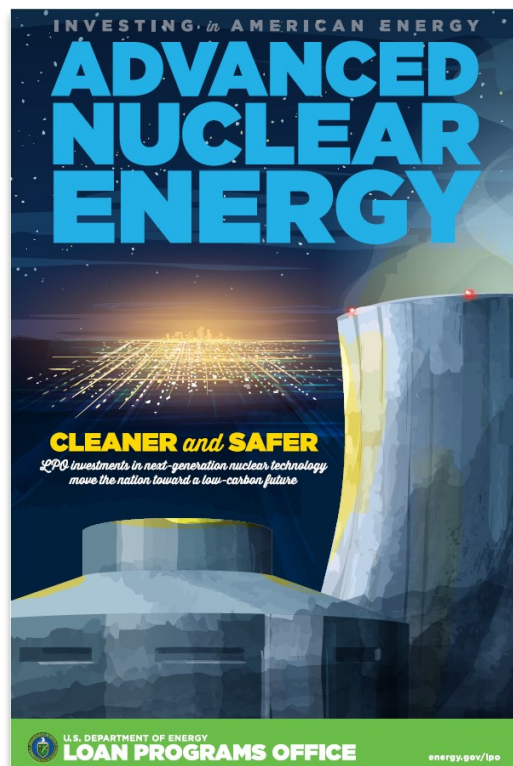
Location: Idaho Falls, ID **NSUF Director:** Rory Kennedy **www.nsuf.inl.gov**
Preferred Point of Contact: Tiffany Adams / tiffany.adams@inl.gov / 208-526-4081

U.S. DEPARTMENT OF ENERGY LOAN PROGRAMS OFFICE



The Department of Energy's Loan Programs Office (LPO) finances large-scale, all-of-the-above energy infrastructure projects in the United States. LPO's in-house team has decades of financial technical, legal, and environmental experience and works closely with industry to bridge gaps in the commercial debt market when innovative technologies or unfamiliar borrowers may not be well understood by the private sector.

With more than \$40 billion of loans and loan guarantees available, LPO can provide access to debt not typically available in the commercial sector. To date, LPO has approved more than \$30 billion of loans and loan guarantees for more than 30 projects and has \$12.5 billion of available loan guarantees under its Advanced Nuclear Energy Projects Solicitation. LPO has a proven track record that includes transforming existing energy infrastructure, reviving nuclear construction, accelerating growth of utility-scale solar and wind, expanding domestic manufacturing of electric vehicles, and improving the lives of all Americans by catalyzing new energy technology and creating jobs.



Location: Washington, DC

www.energy.gov/lpo

Preferred Point of Contact: 202-586-8336 / lgprogram@hq.doe.gov

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Prepared by:



GAIN Gateway for Accelerated
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Editor: Teresa Krynicki
Co-Editor: Phyllis King

Contact Us

GAIN

PO Box 1625
MS 3855
Idaho Falls, ID 83415
(208) 526-7763

Email: GAIN@inl.gov

Visit us on the web at
gain.inl.gov



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